

Figure 1: Ribozyme Motifs

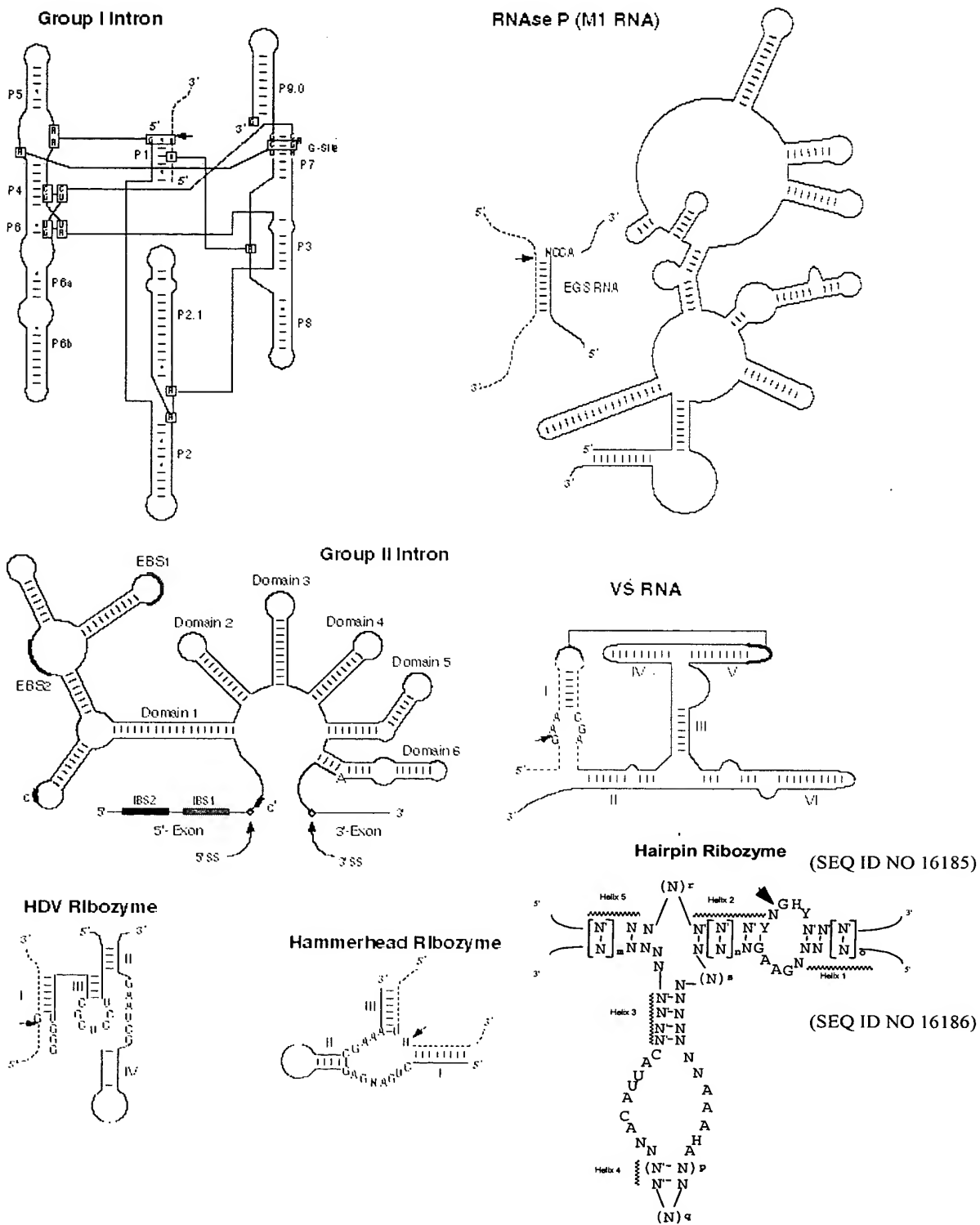


Figure 2: Examples of Nuclease Stable Ribozyme Motifs

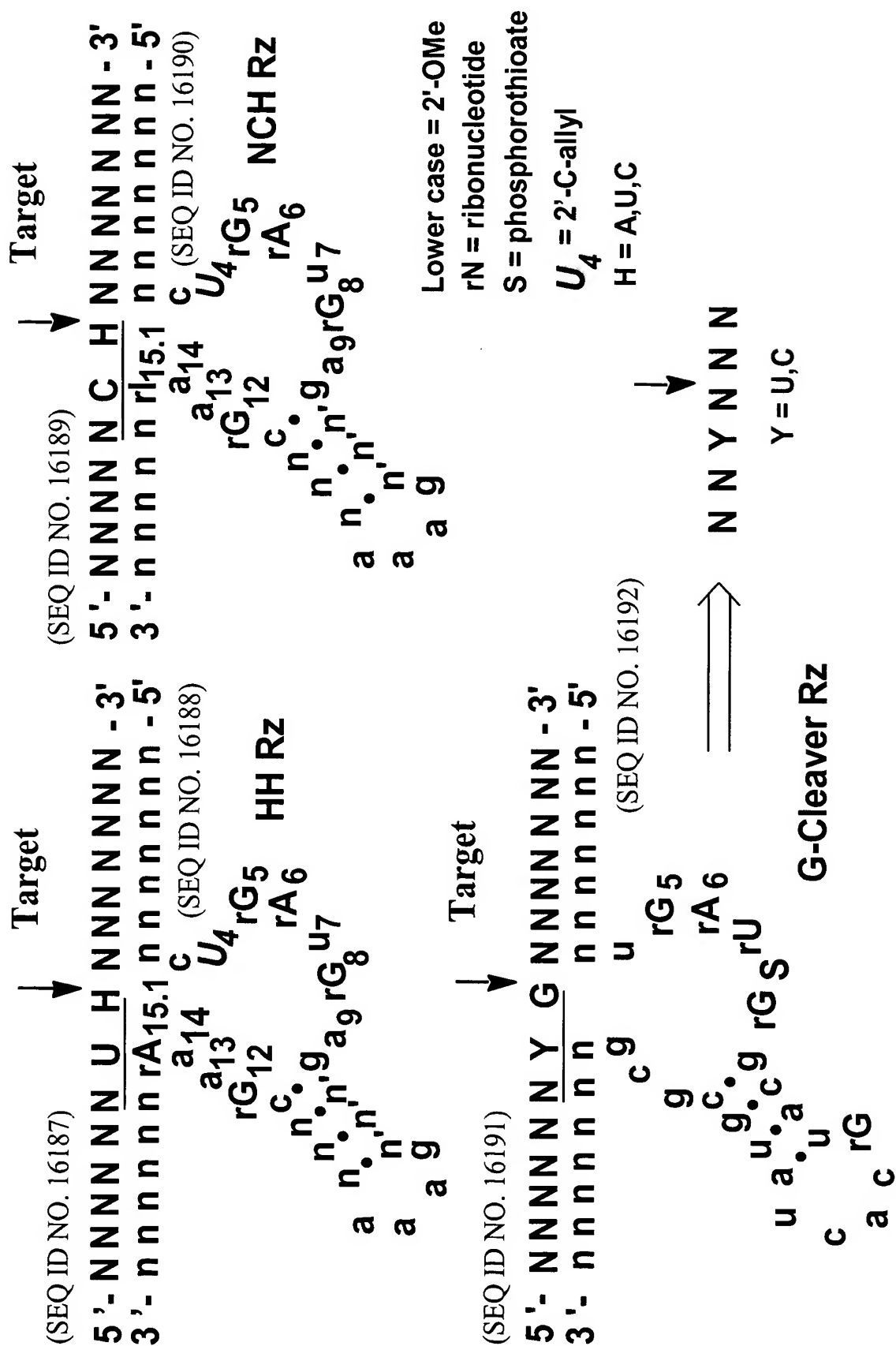


Figure 3: 2'-O-Me substituted Amberzyme Enzymatic Nucleic Acid Motif

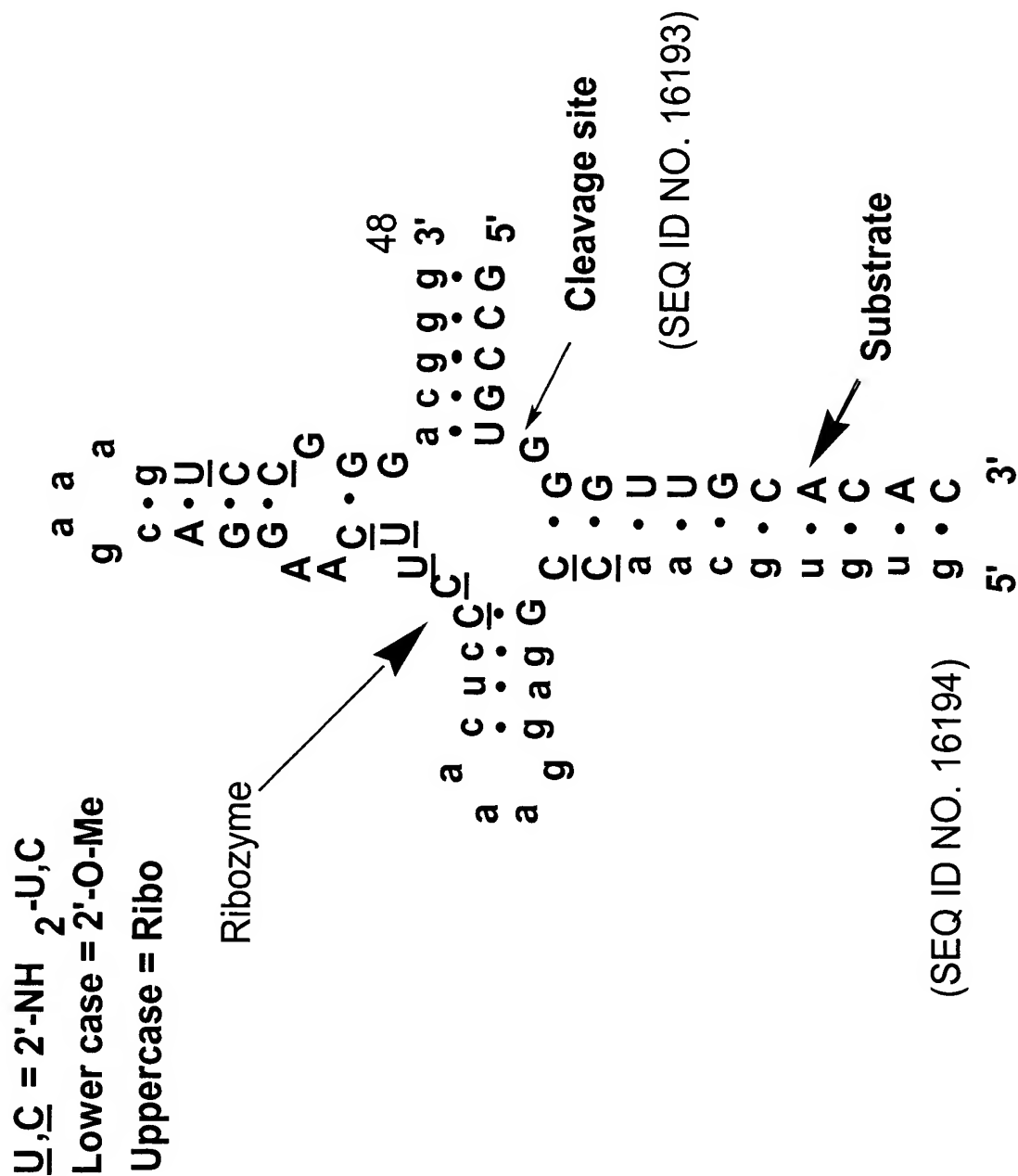
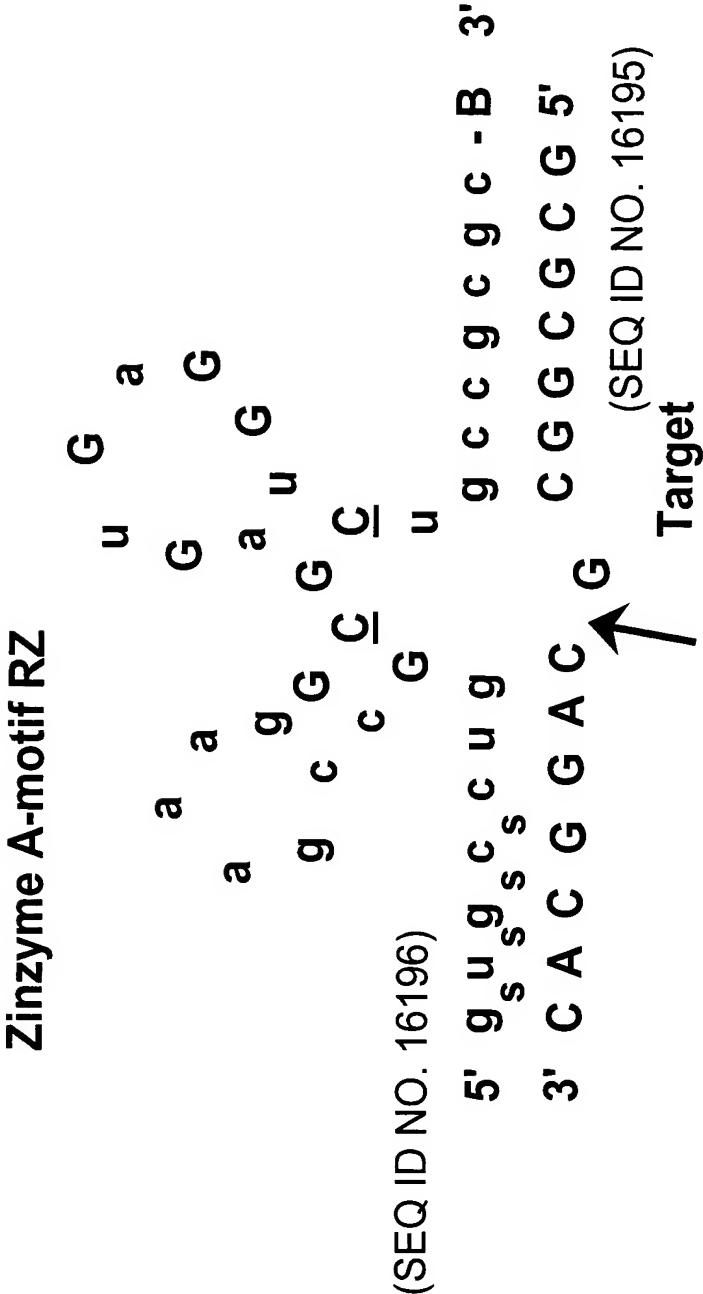


Figure 4: Stabilized Zinzyme Ribozyme Motif



Legend

Uppercase indicates natural ribo residues

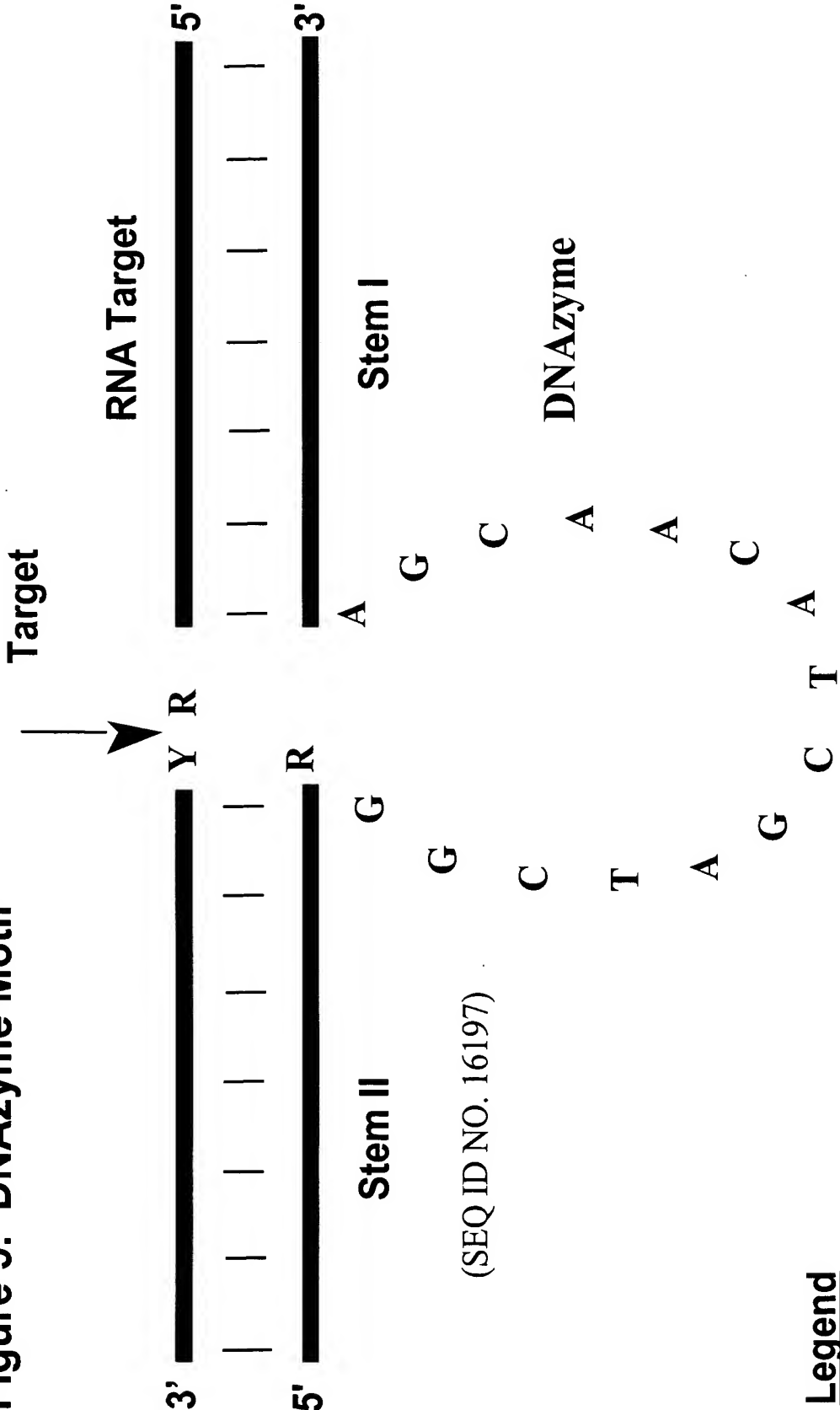
C indicates 2'- d-NH₂-C

Lowercase: 2'-O-Me

Subscript _s indicates phosphothioate linkage

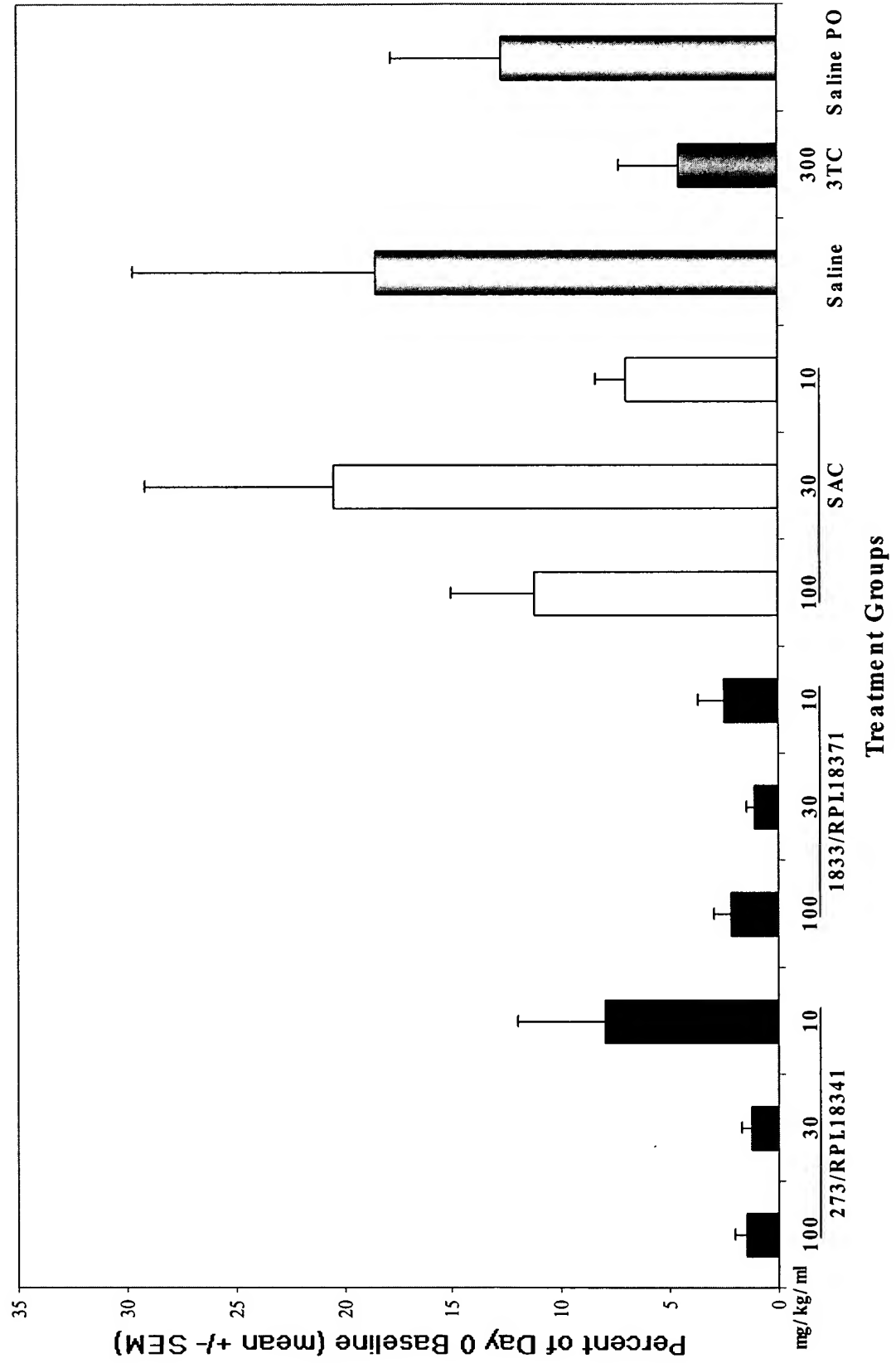
B: 3'- 3' abasic moiety

Figure 5: DNAzyme Motif



Legend
Y = U or C
R = A or G

**Figure 6: Change in Serum HBV DNA Levels Following 14 Days of Ribozyme
 Treatment of HBV Transgenic Mice**



**Figure 7: Mean Serum HBV DNA Levels Following 14 Days of Ribozyme
 Treatment of HBV Transgenic Mice**

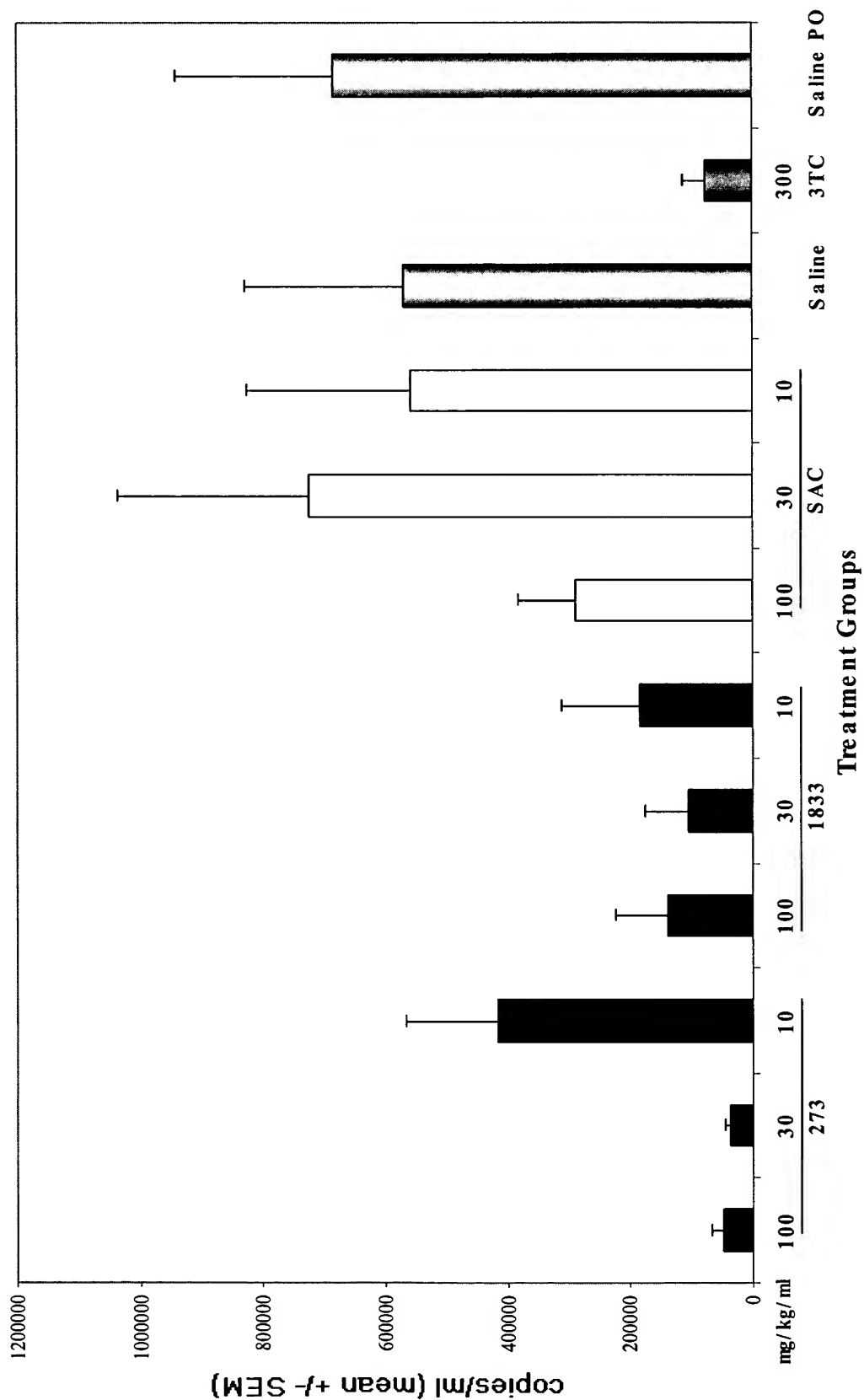


Figure 8: Change in Serum HBV DNA Levels (Log) Following 14 Days of Ribozyme Treatment of HBV Transgenic Mice

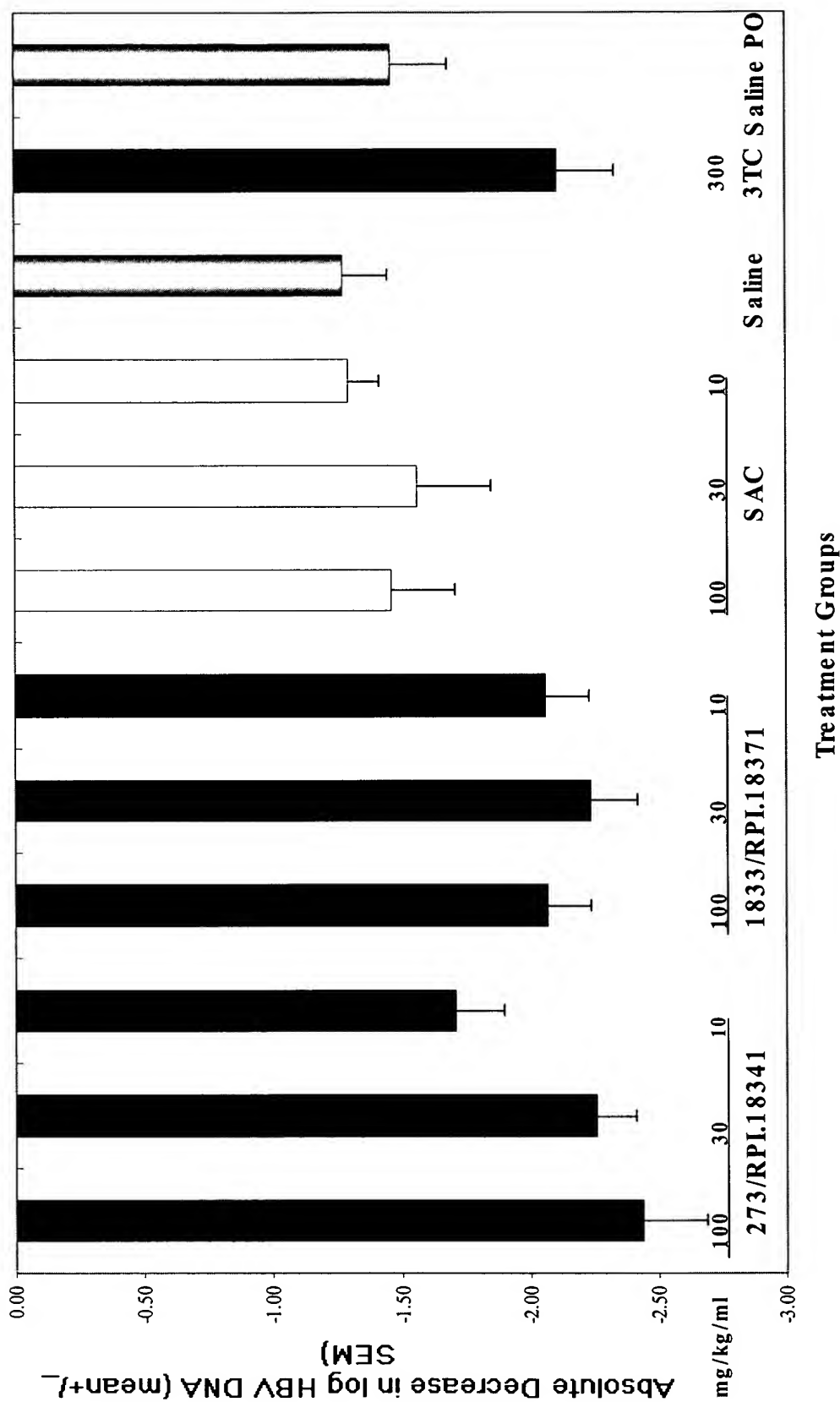
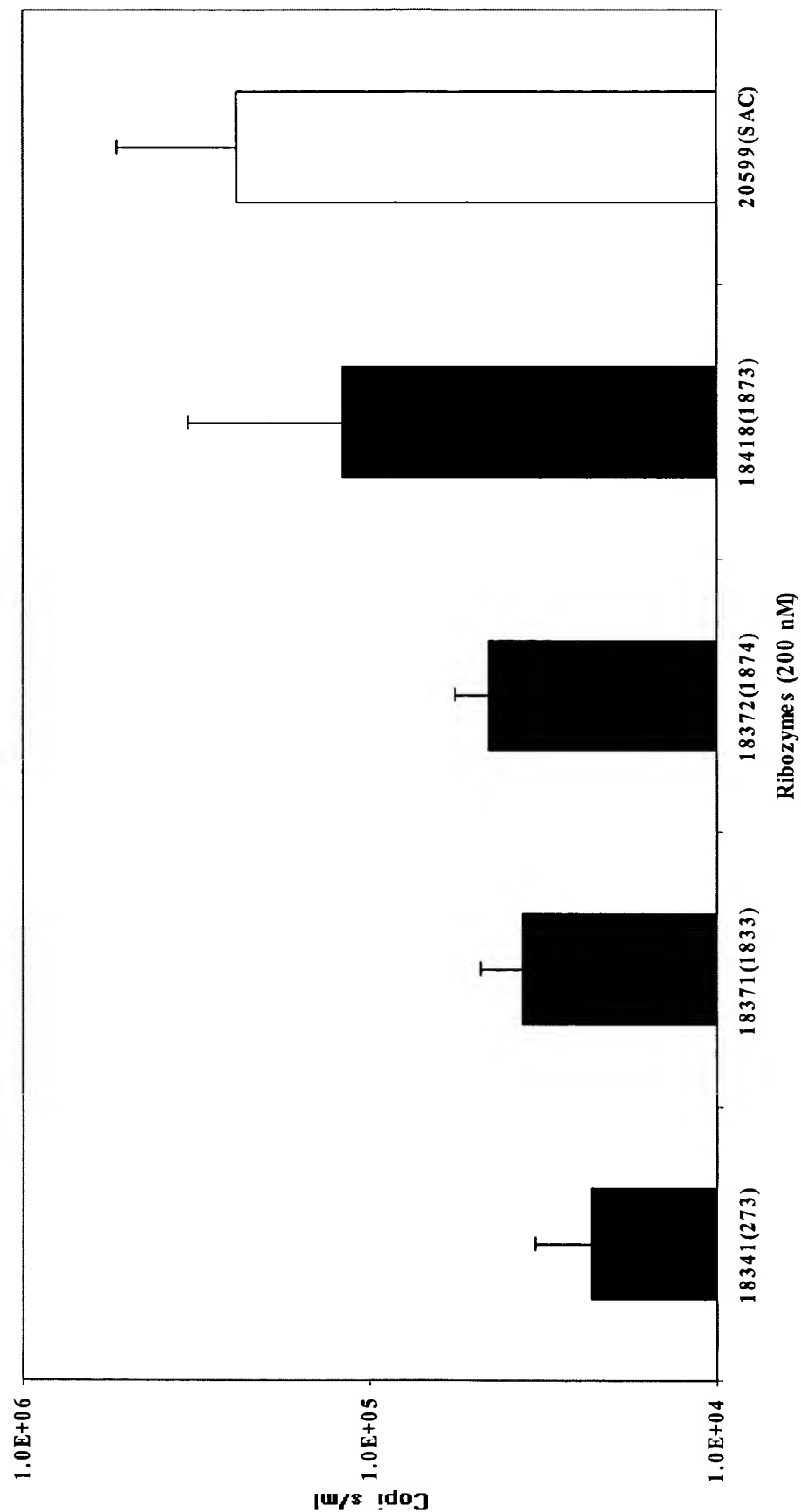


Figure 9: anti-HBV Ribozymes in HepG2.2.15 Cells: HBV DNA



**Figure 10: Arm, Loop, and Stem Variants of Anti-HBV Ribozyme Targeting
 Site 273: HBsAg Levels in Hep G2 Cells**

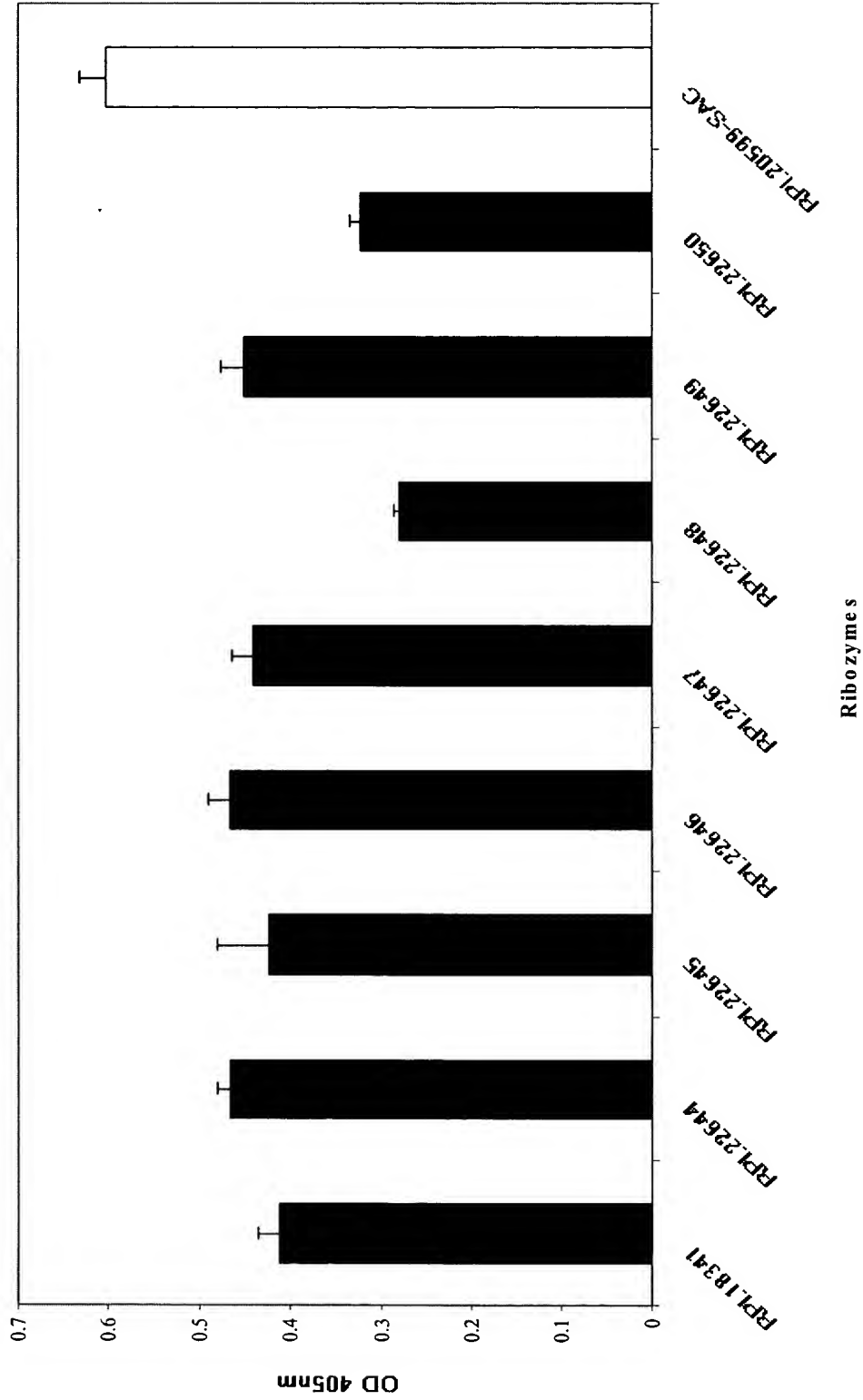
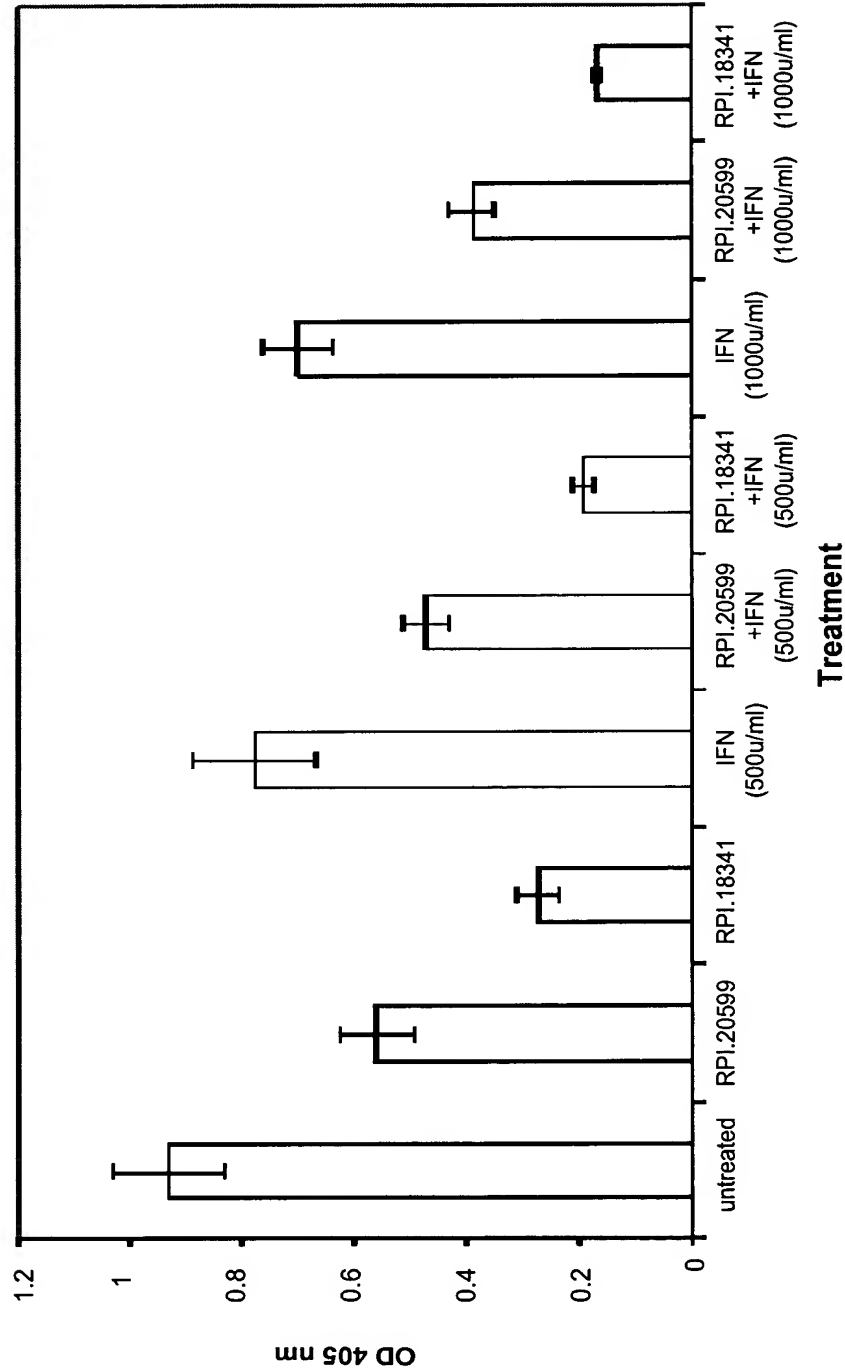


Figure 11: Hep G2 Cells Treated with RPI.18341 and Interferon: HBsAg ELISA



**Figure 12: Hep G2 Cells Treated with 100 nM
RPI.18341 and Lamivudine (3TC): HBsAg ELISA**

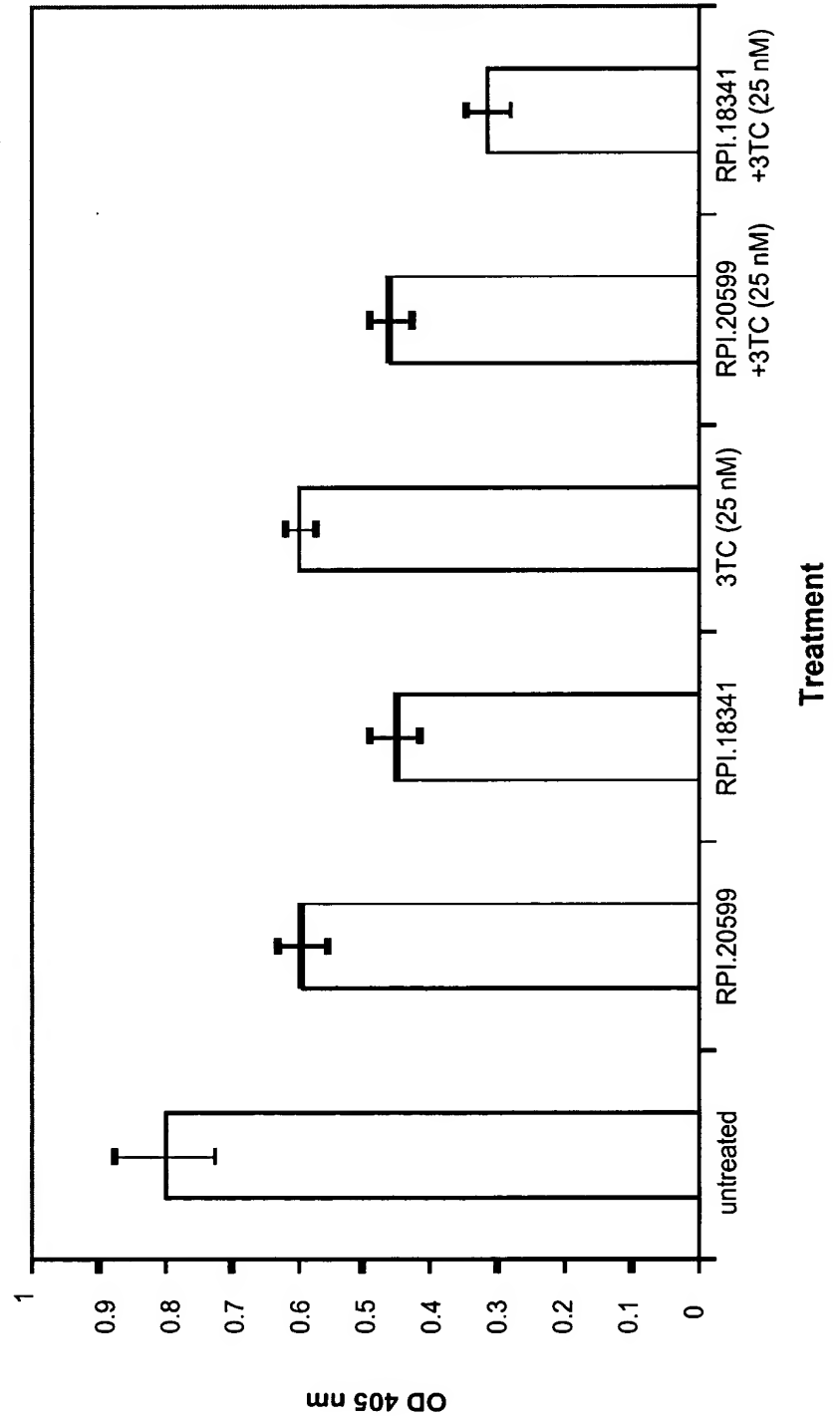


Figure 13: HBV Reverse Transcription

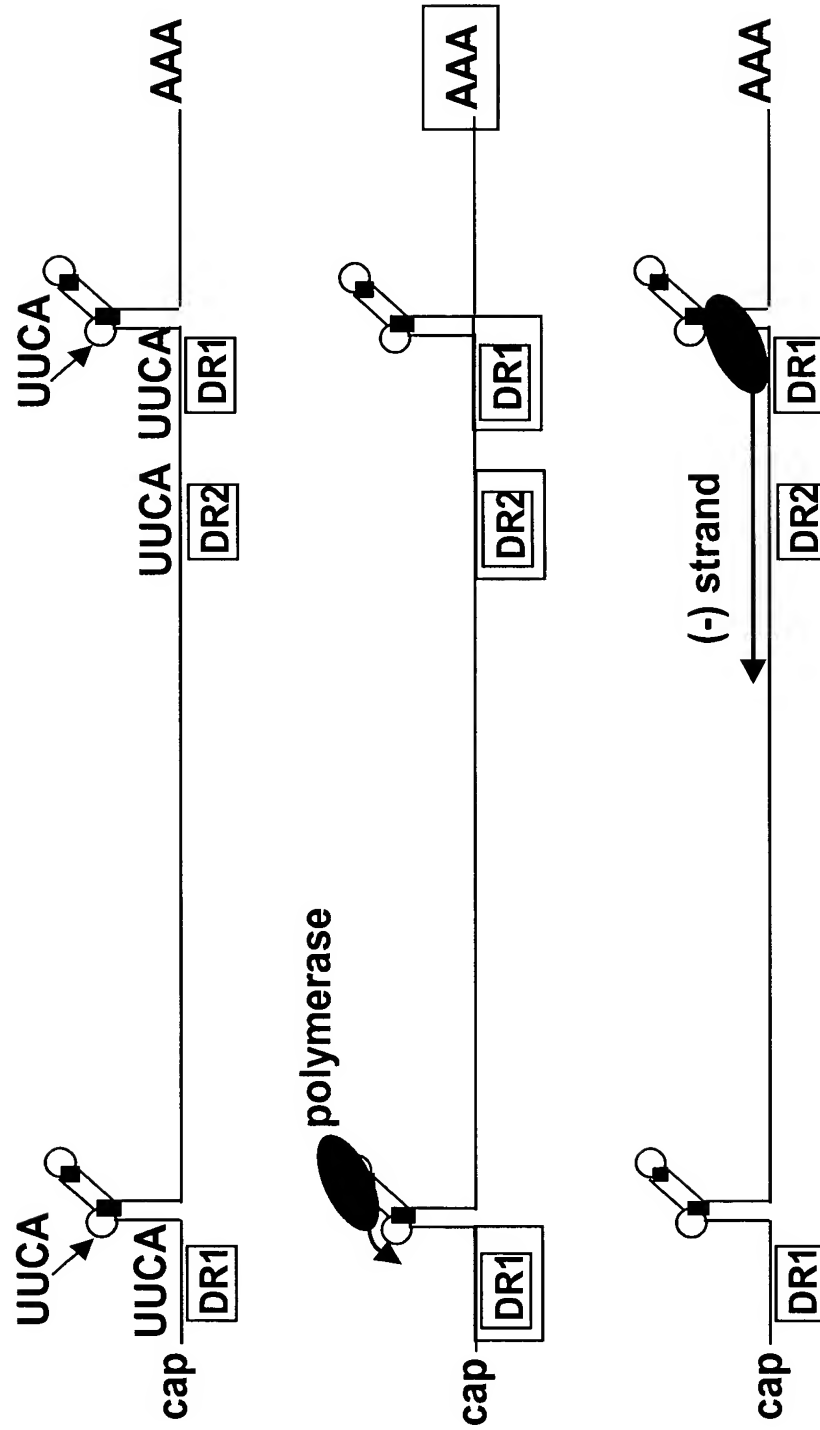
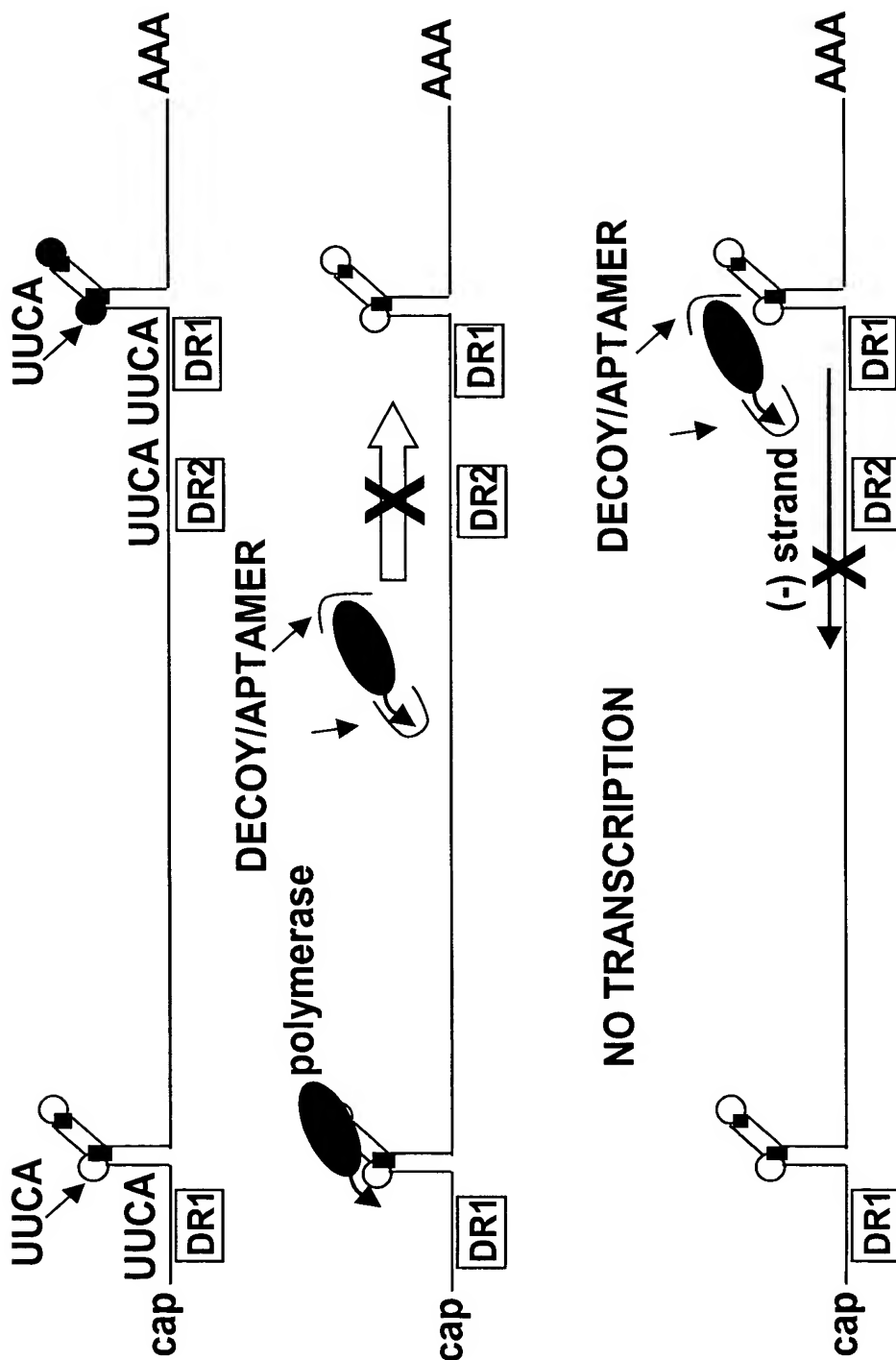


Figure 14: HBV RT Inhibition



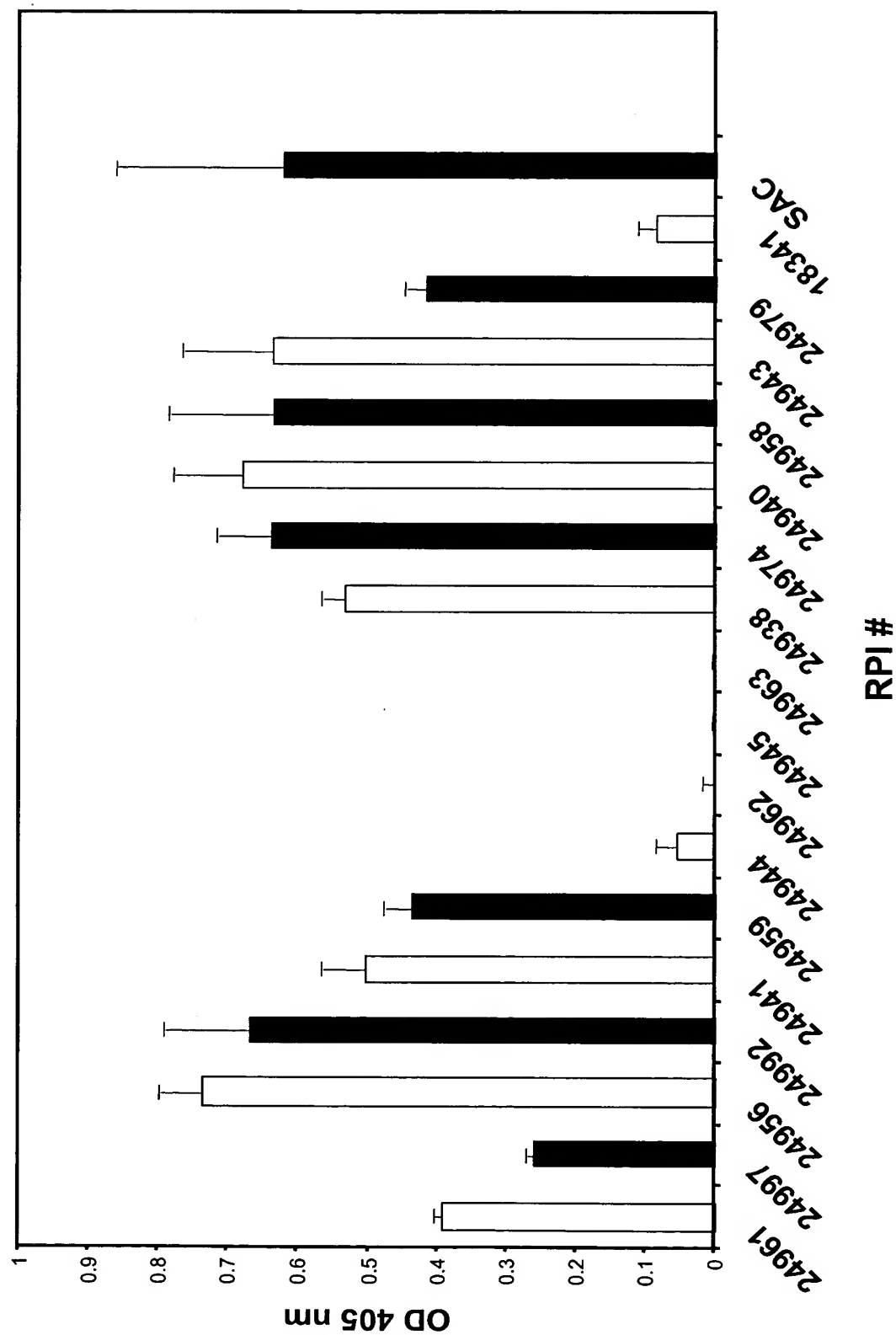


Figure 16: Screening of HBV RT Primer Competitive
Inhibitors (2'-O-Methyl): HBsAg

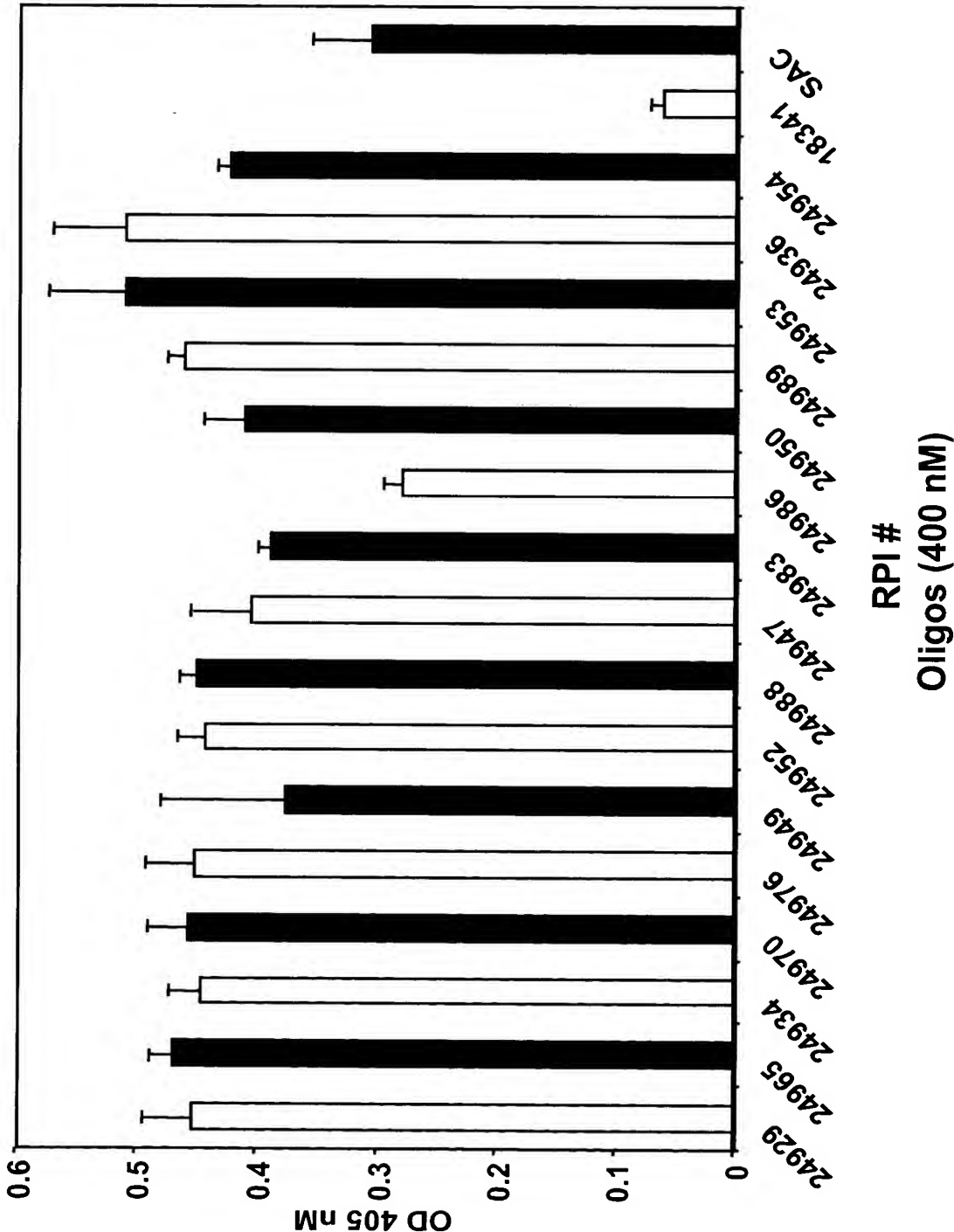


Figure 17: Dose Response with 2'-O-Methyl
UUCAUUCA Oligo: HBsAg

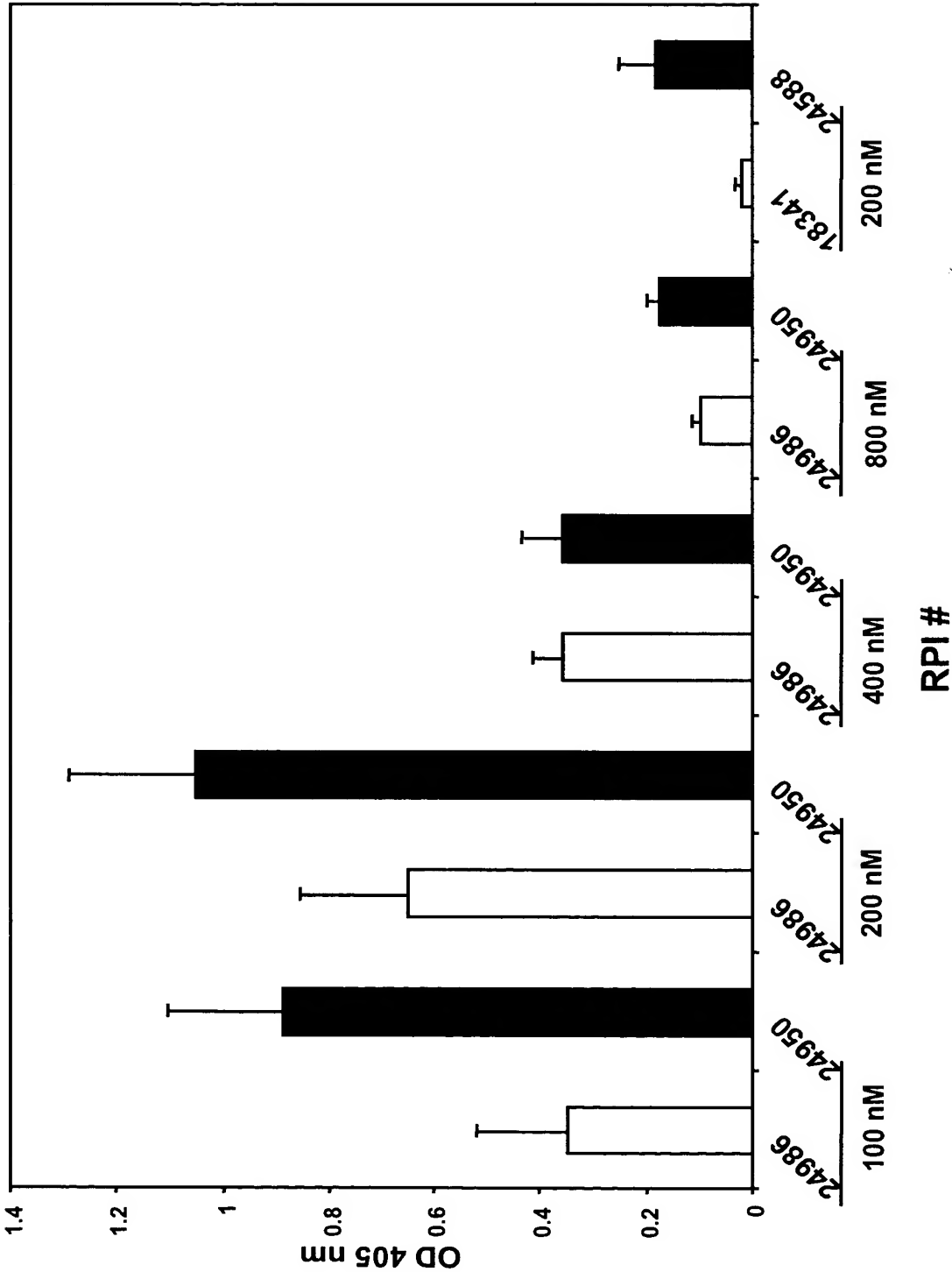


Figure 18: HBV Enhancer I Oligo Screen 200 nM:HBsAg

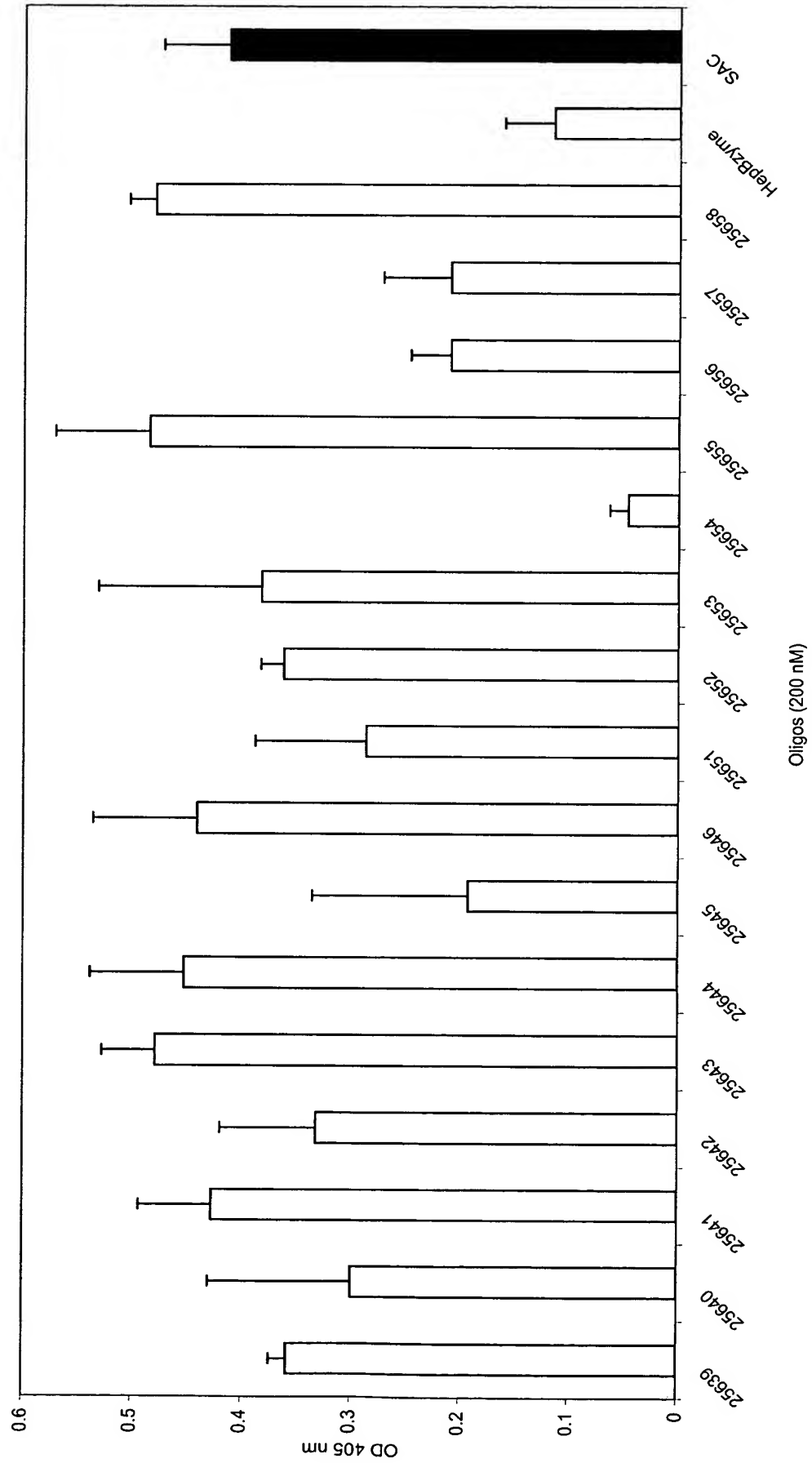


Figure 19: HBV Enhancer I Oligo Screen 400 nM: HBsAg

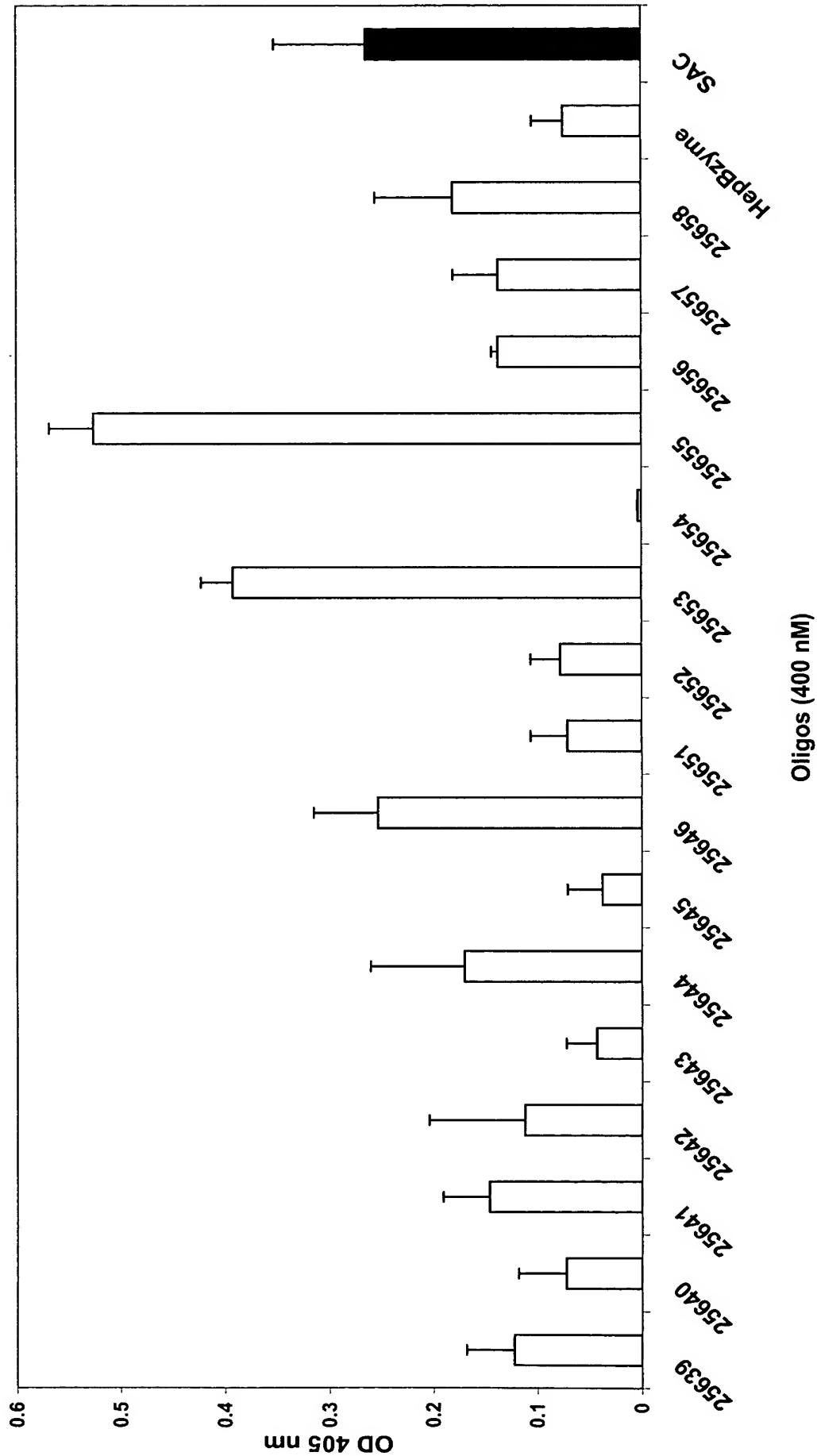
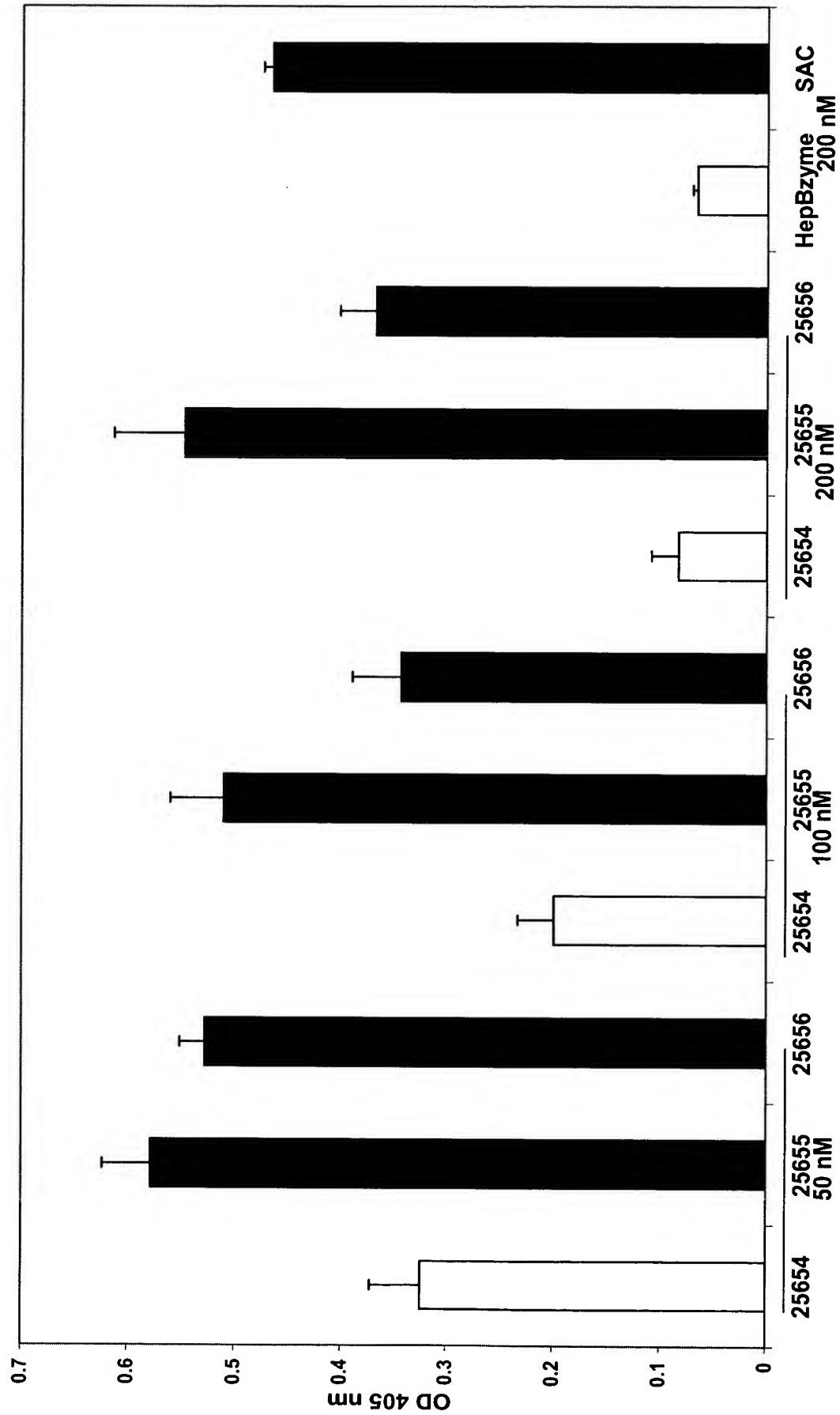
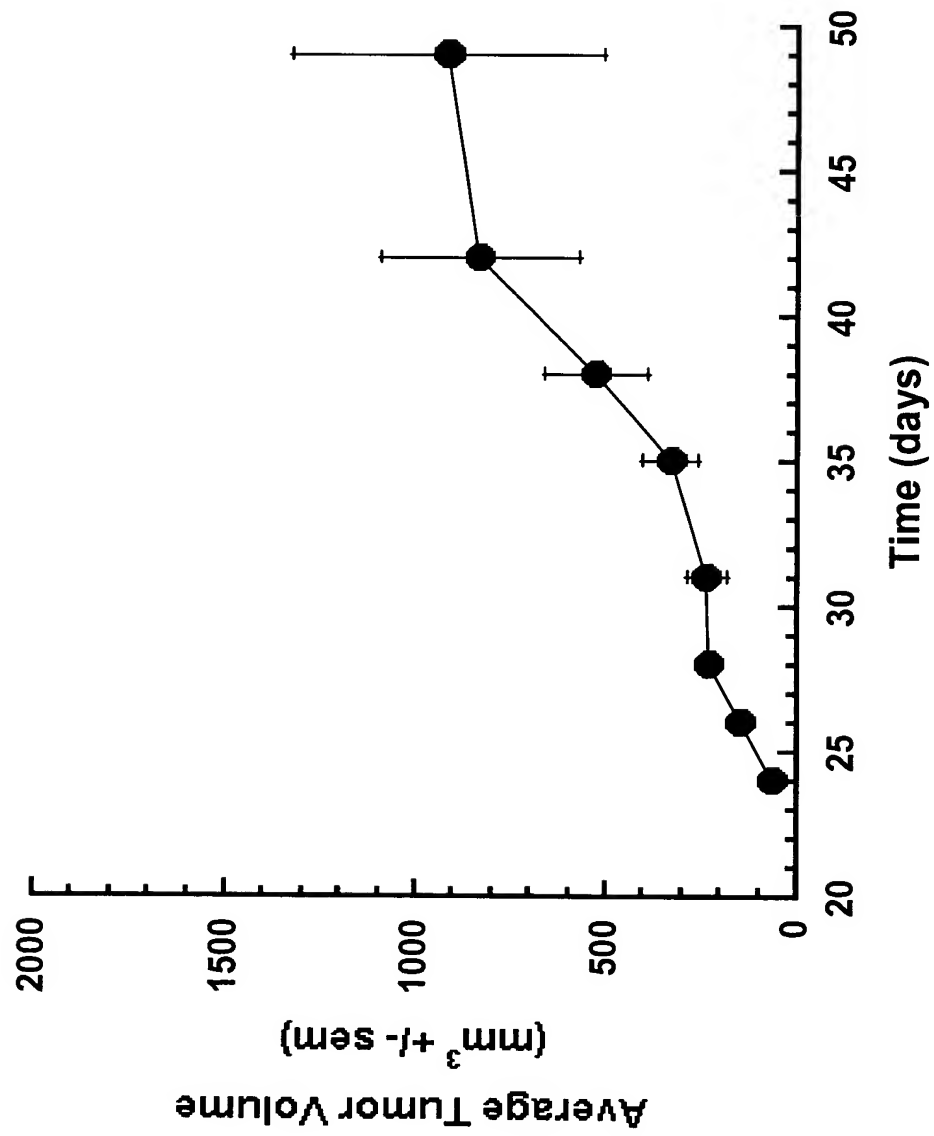


Figure 20: HBV Enhancer 1 Oligos Dose Response HBsAg



**Figure 21: Growth of HepG2.2.15 tumors in
Athymic Nu/Nu female mice**



**Figure 22: Growth of HepG2.2.15 tumors in
Athymic Nu/Nu female mice**

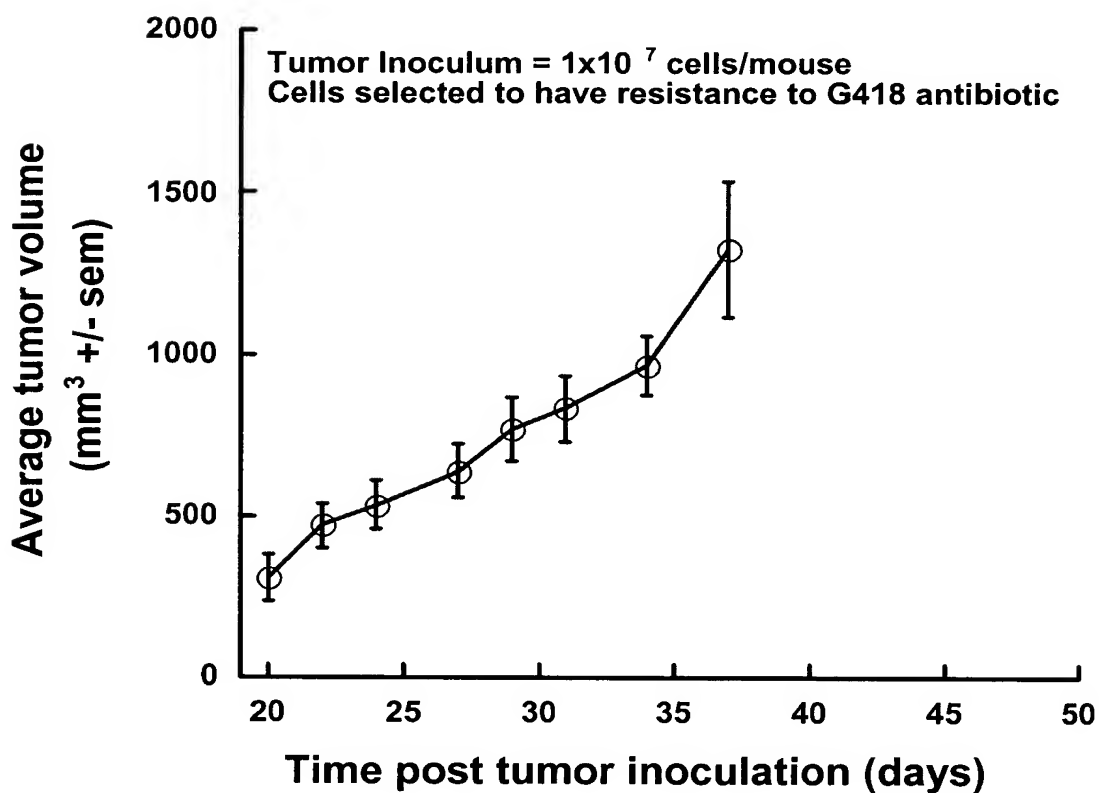
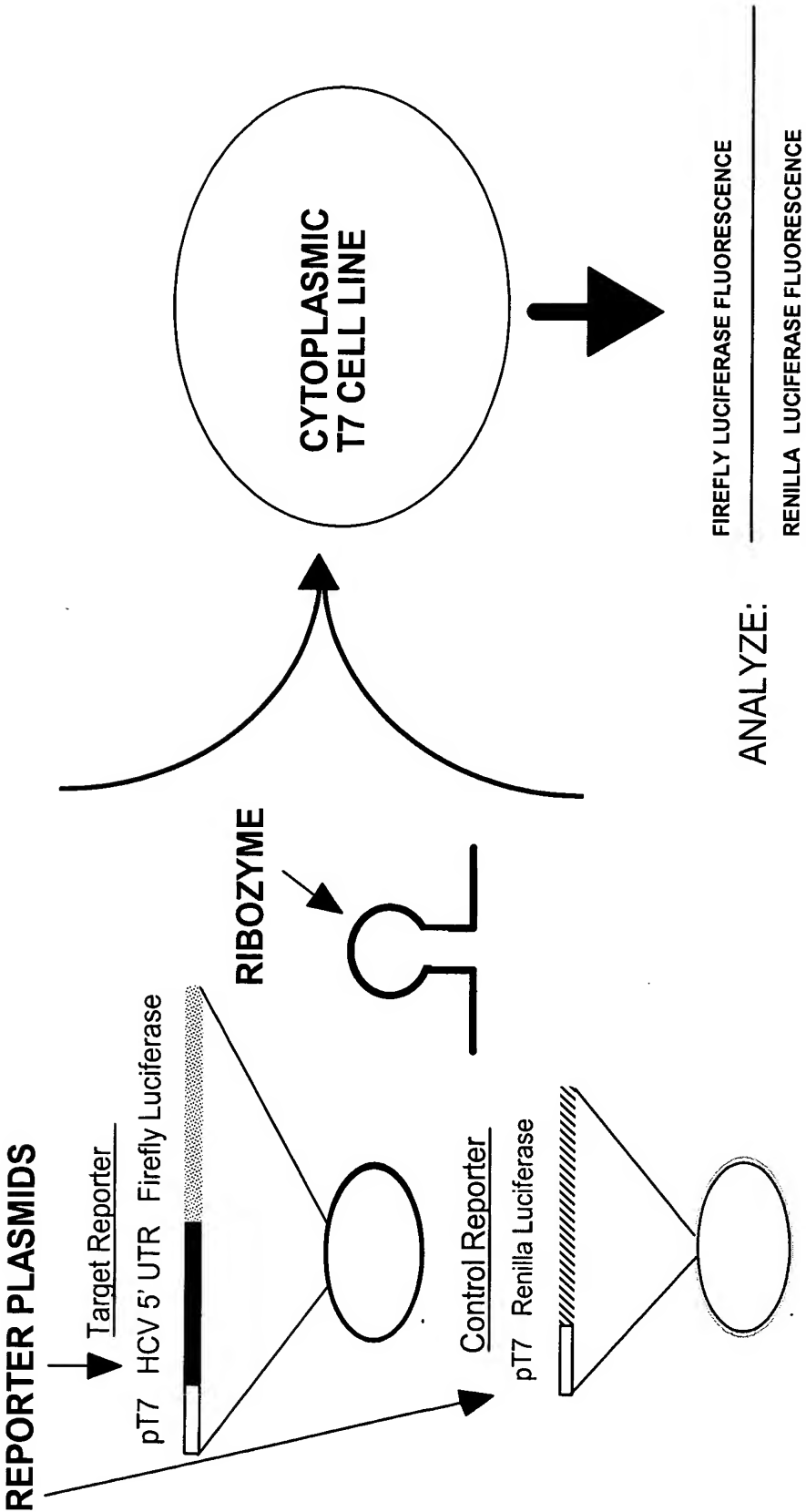


FIGURE 23 Dual Reporter System for Cytoplasmic HCV Target





**Figure 26A: Enzymatic nucleic acid mediated inhibition of
HCV-luciferase expression**

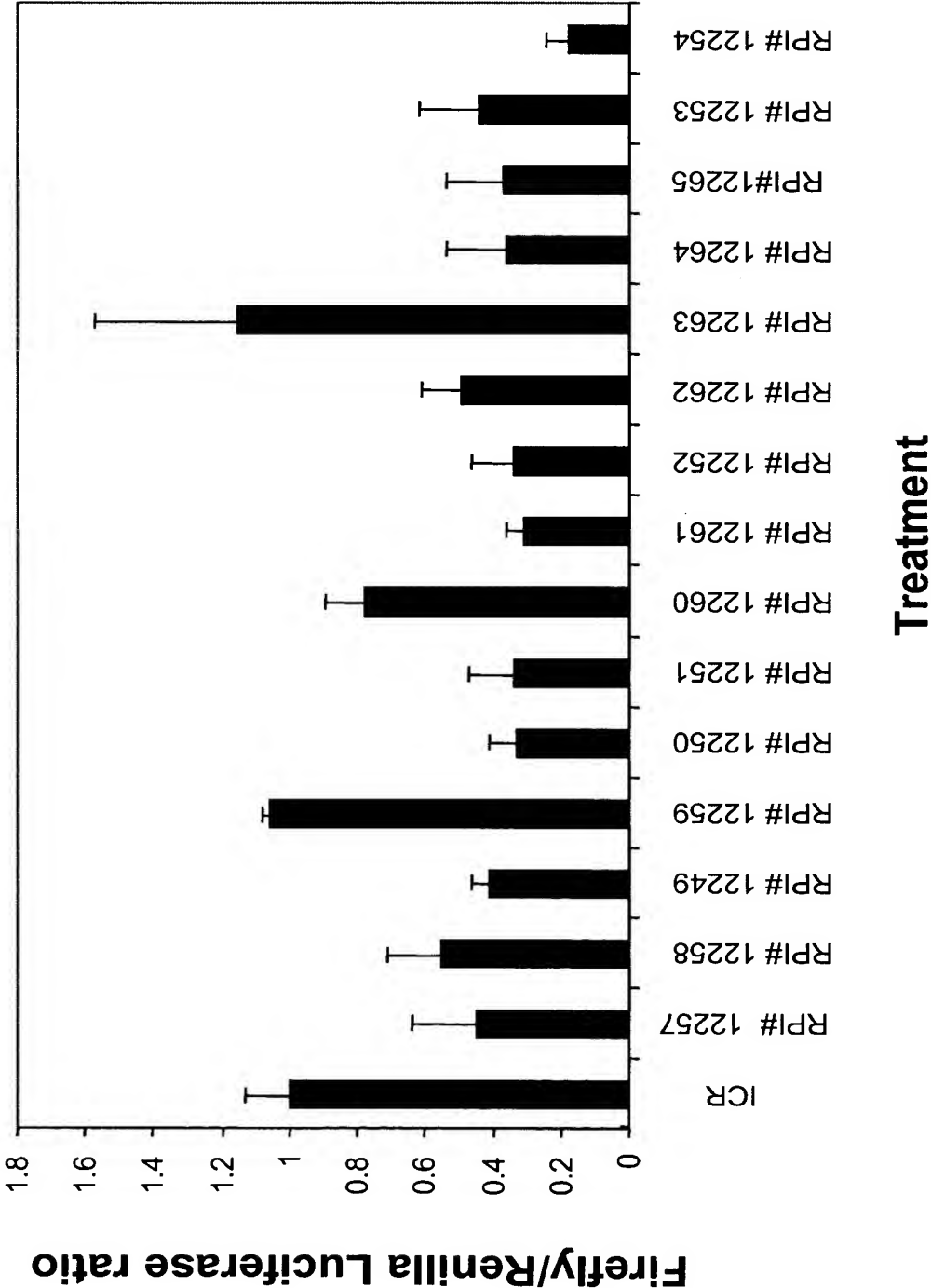
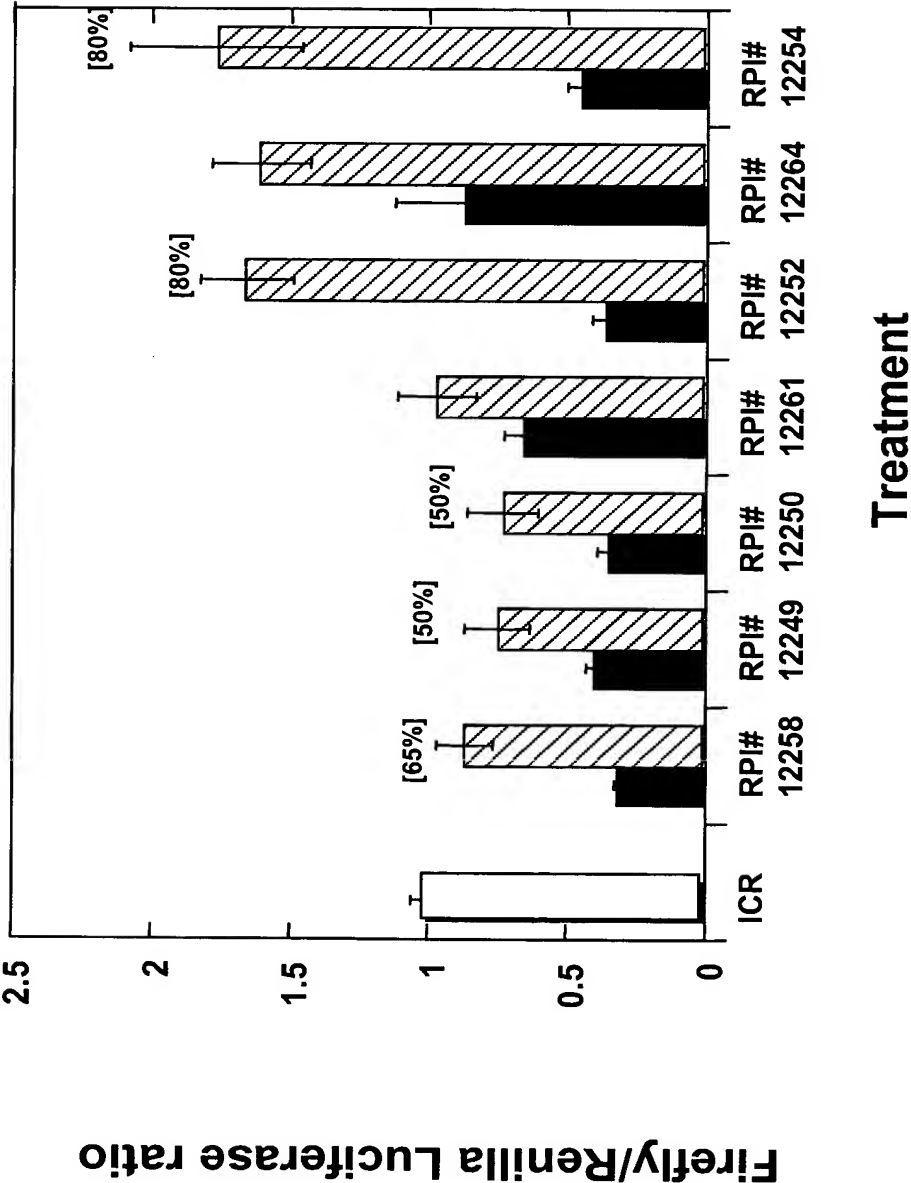
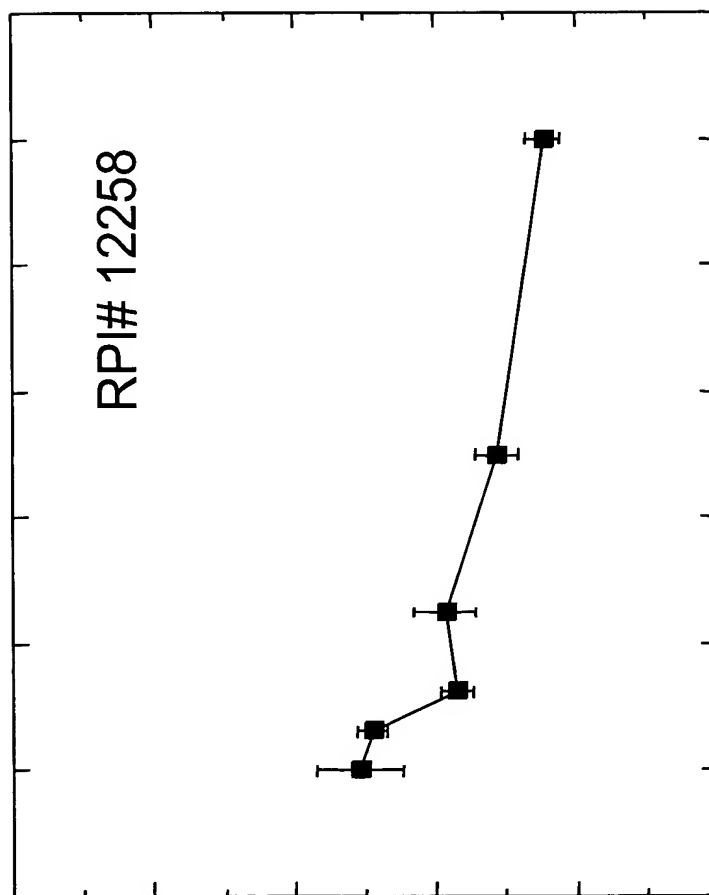


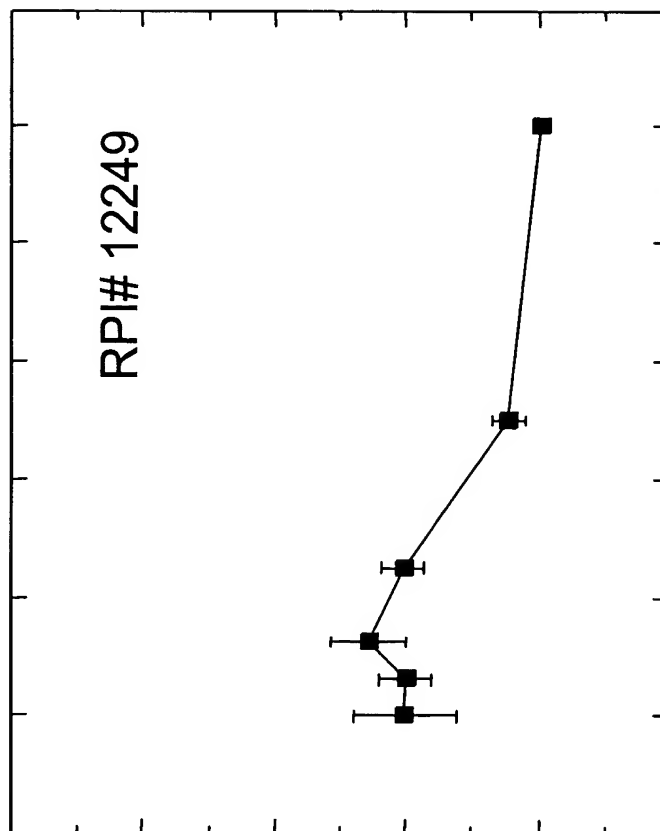
Figure 26B: Enzymatic nucleic acid mediated inhibition of
HCV-luciferase expression



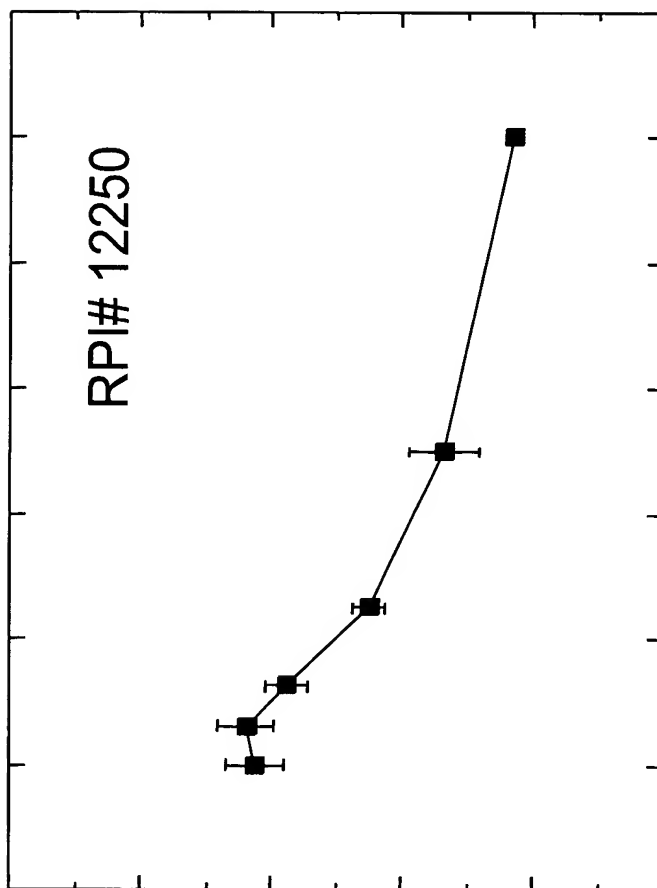
**Figure 27A: Dose-dependent enzymatic nucleic acid inhibition
of HCV/luciferase expression**



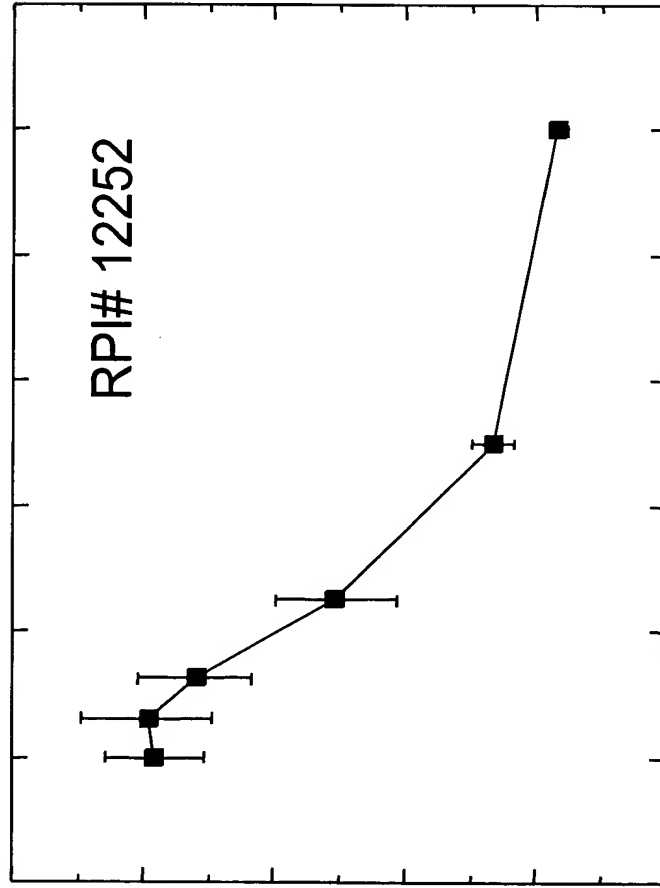
**Figure 27B: Dose-dependent enzymatic nucleic acid inhibition
of HCV/luciferase expression**



**Figure 27C: Dose-dependent enzymatic nucleic acid inhibition
of HCV/luciferase expression**



**Figure 27D: Dose-dependent enzymatic nucleic acid inhibition
of HCV/luciferase expression**



**Figure 27E: Dose-dependent enzymatic nucleic acid inhibition
of HCV/luciferase expression**

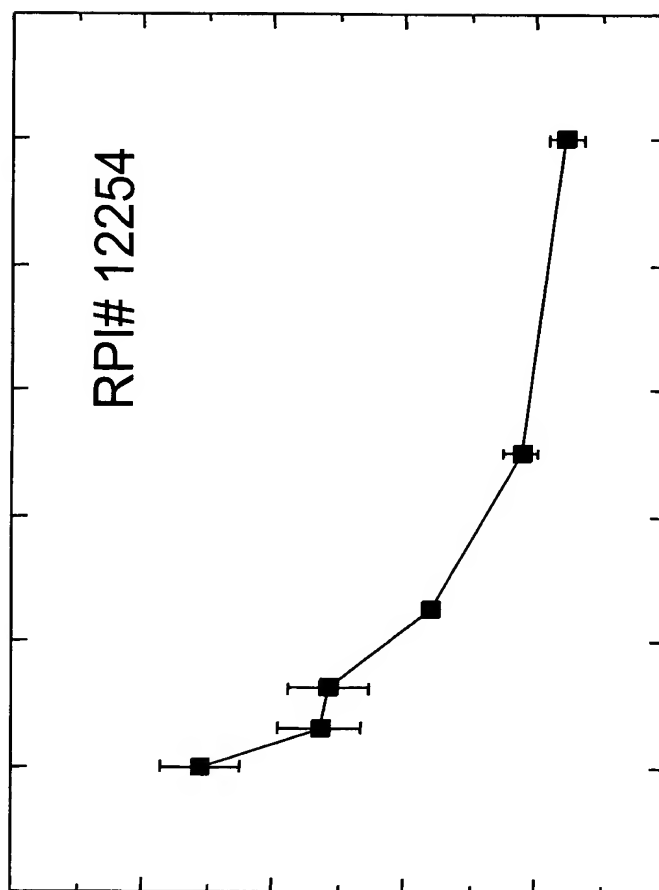
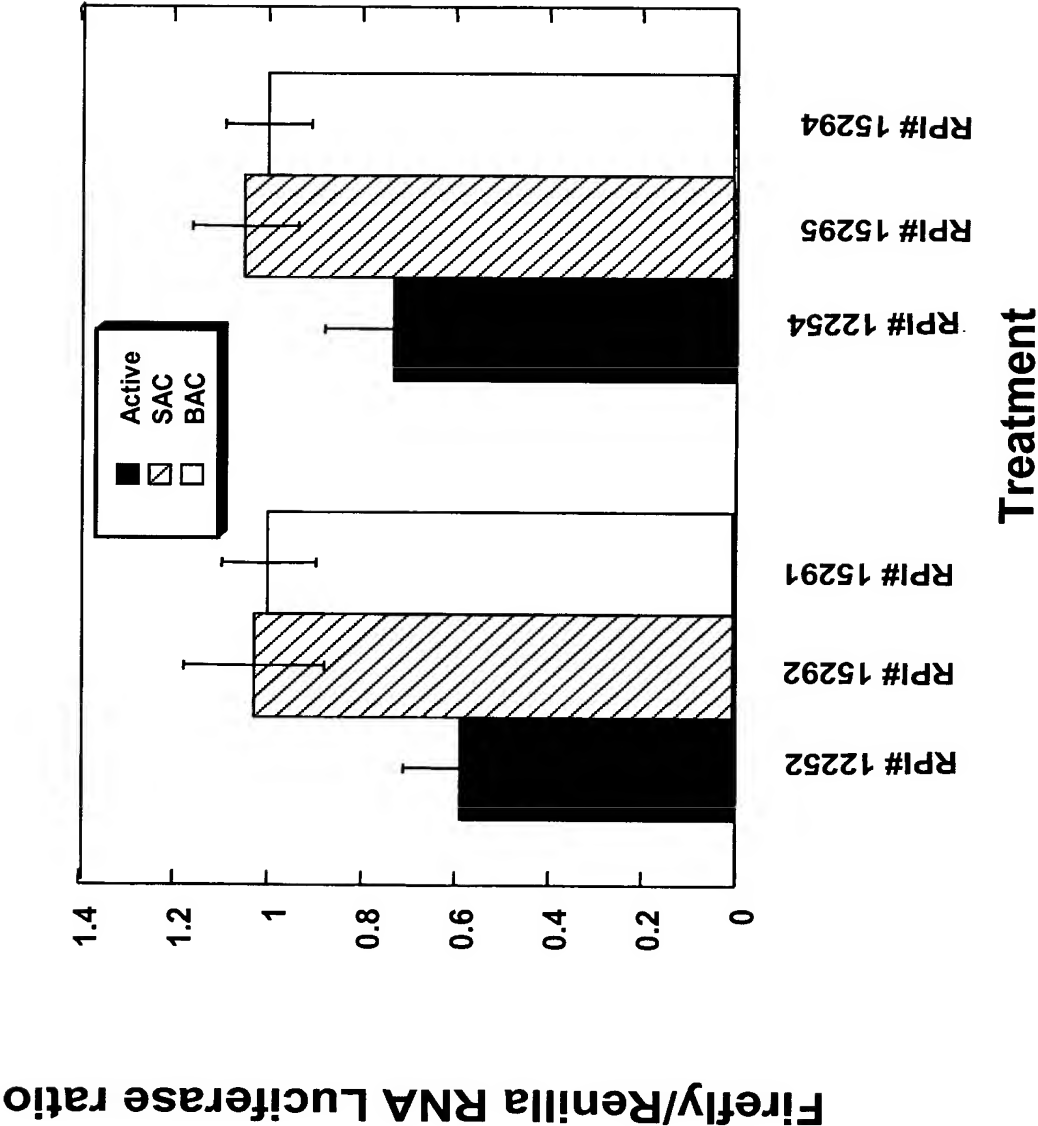


Figure 28A: Enzymatic nucleic acid reduction of HCV/luciferase
RNA and inhibition of HCV-luciferase expression



**Figure 28B: Enzymatic nucleic acid reduction of HCV/luciferase
RNA and inhibition of HCV-luciferase expression**

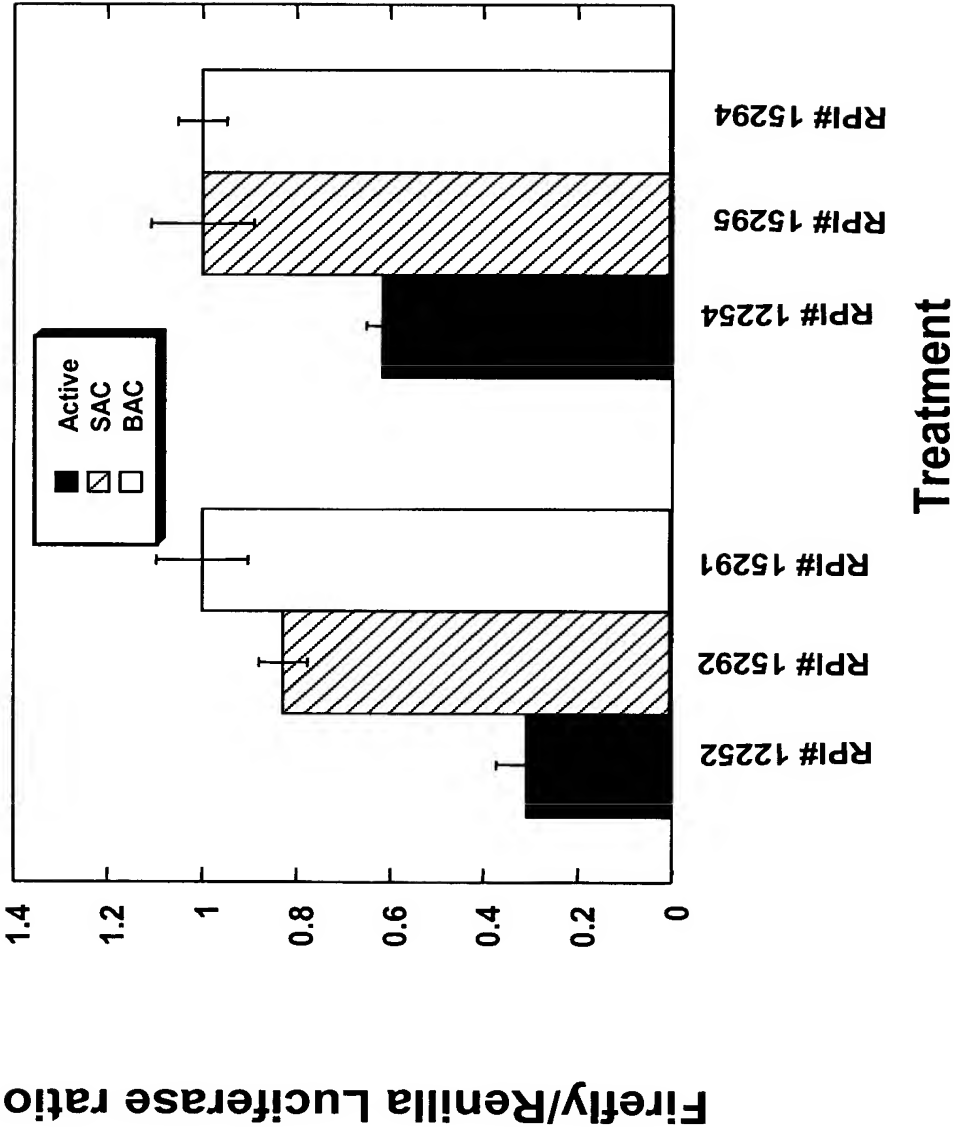


Figure 29A: Interferon Dose response with Enzymatic Nucleic Acid

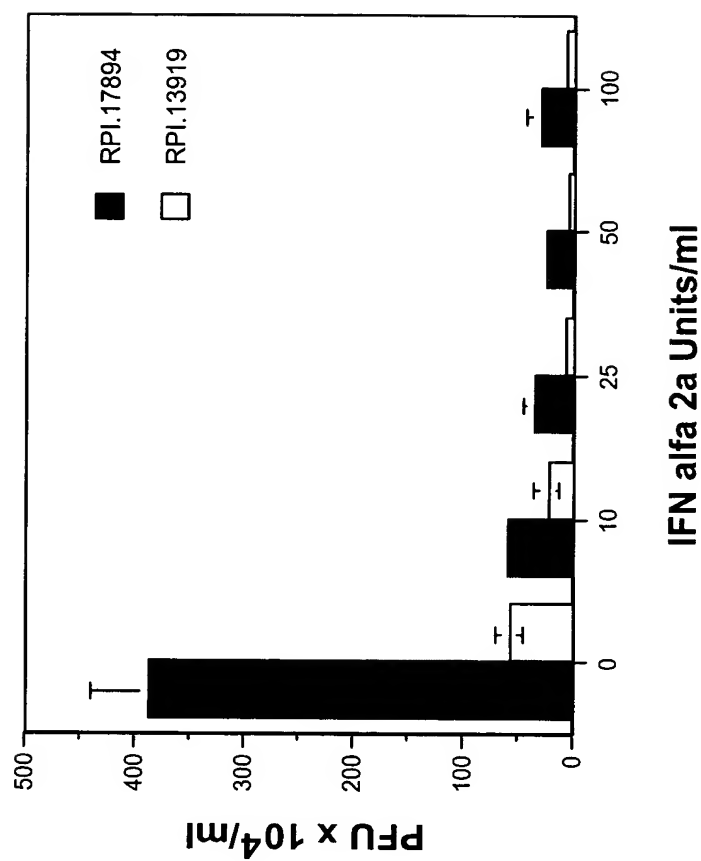


Figure 29B: Interferon Dose response with Enzymatic Nucleic Acid

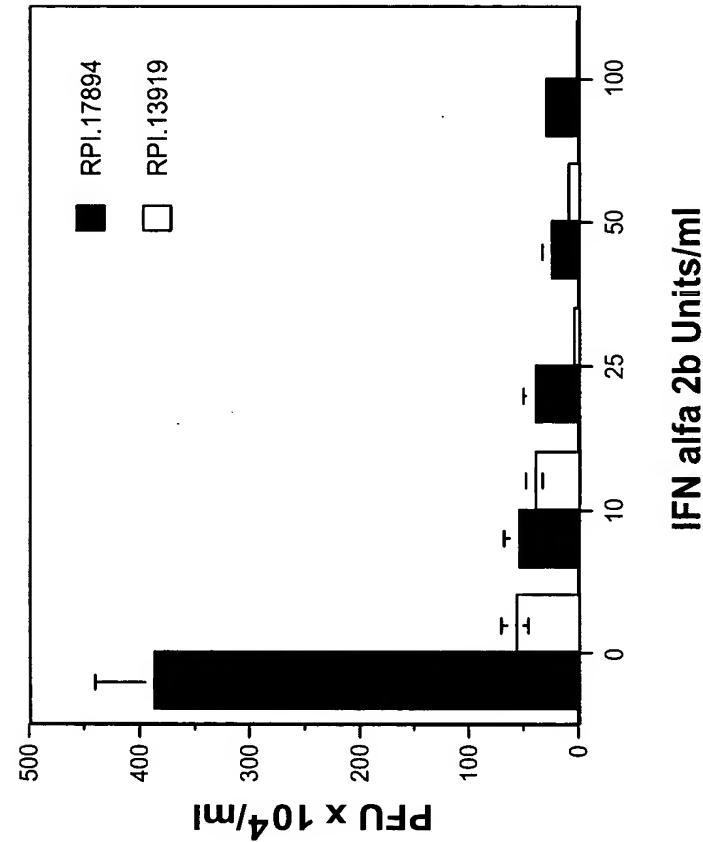


Figure 30: Site 195 anti-HCV enzymatic nucleic acid dose response in combination with interferon pretreatment

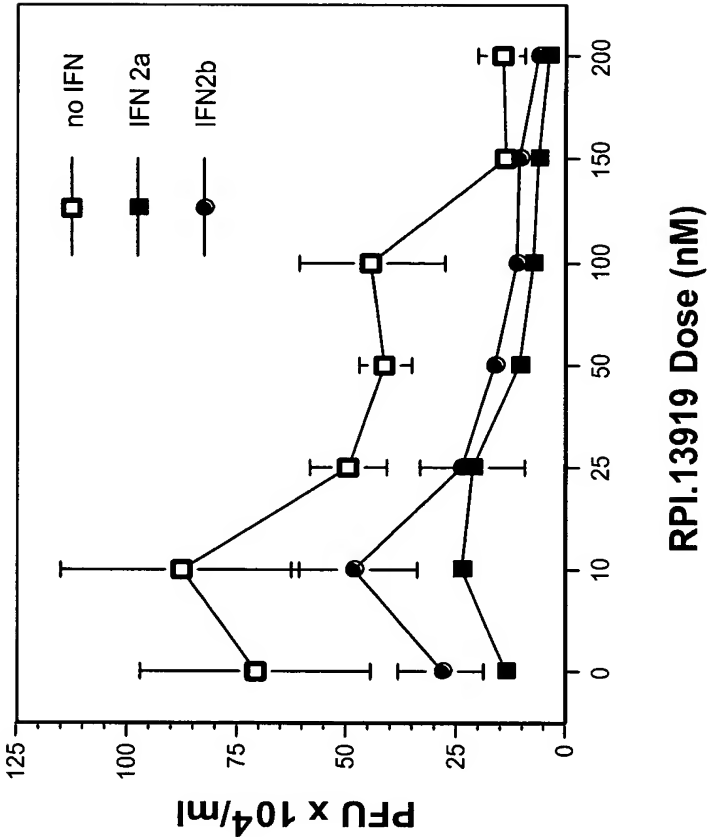


Figure 31A: CIFN dose response with site 195 anti-HCV enzymatic nucleic acid treatment

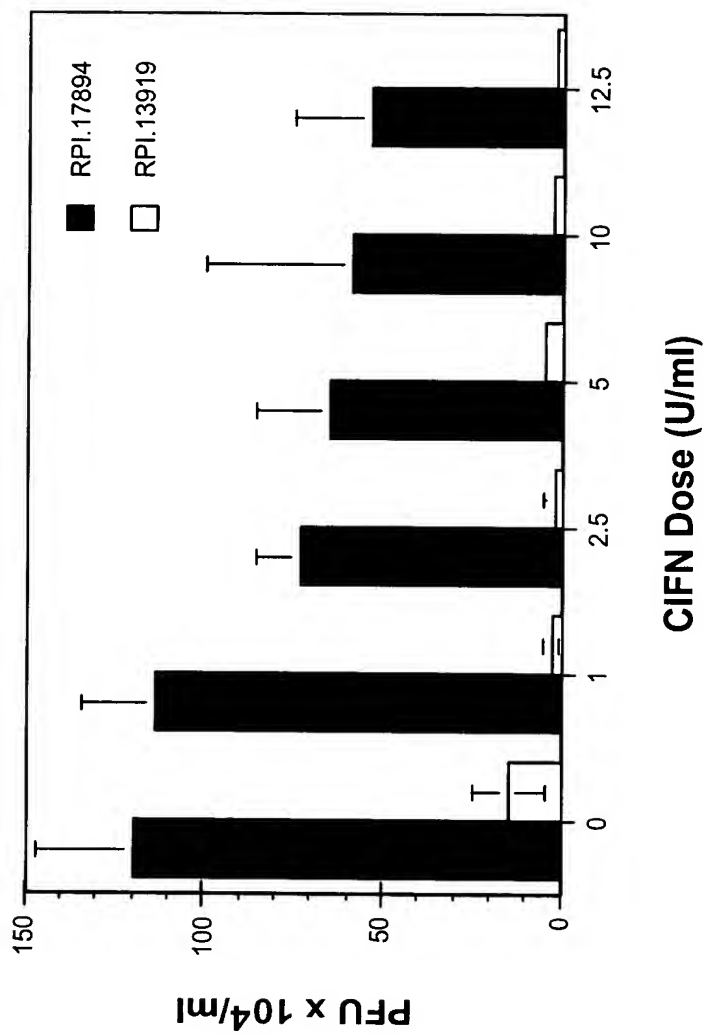


Figure 31B: Site 195 anti-HCV enzymatic nucleic acid dose response with CIFN pretreatment

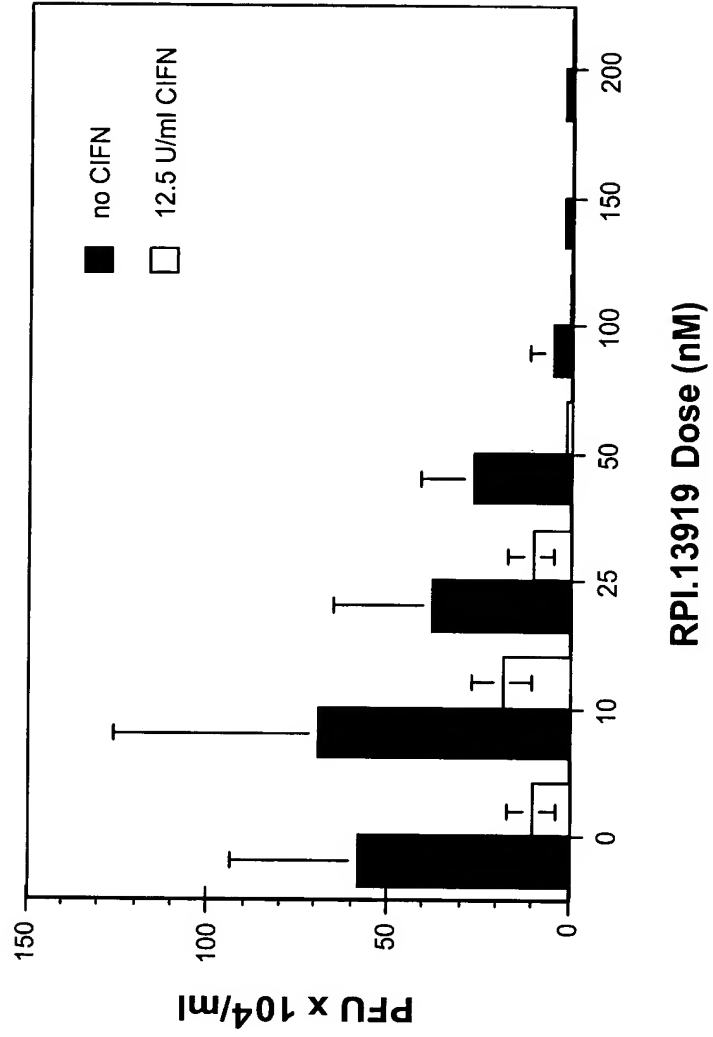
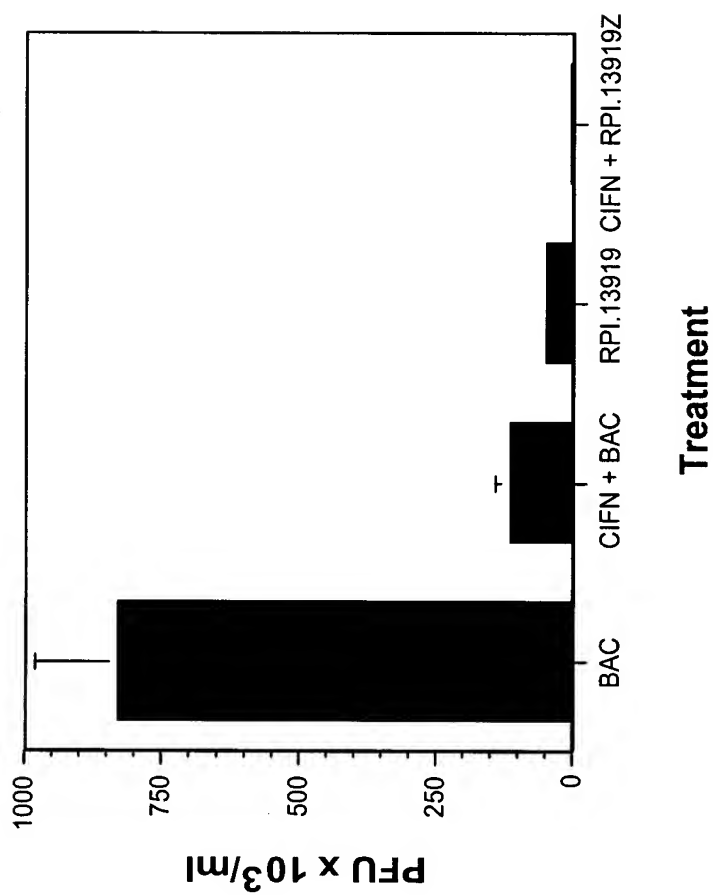
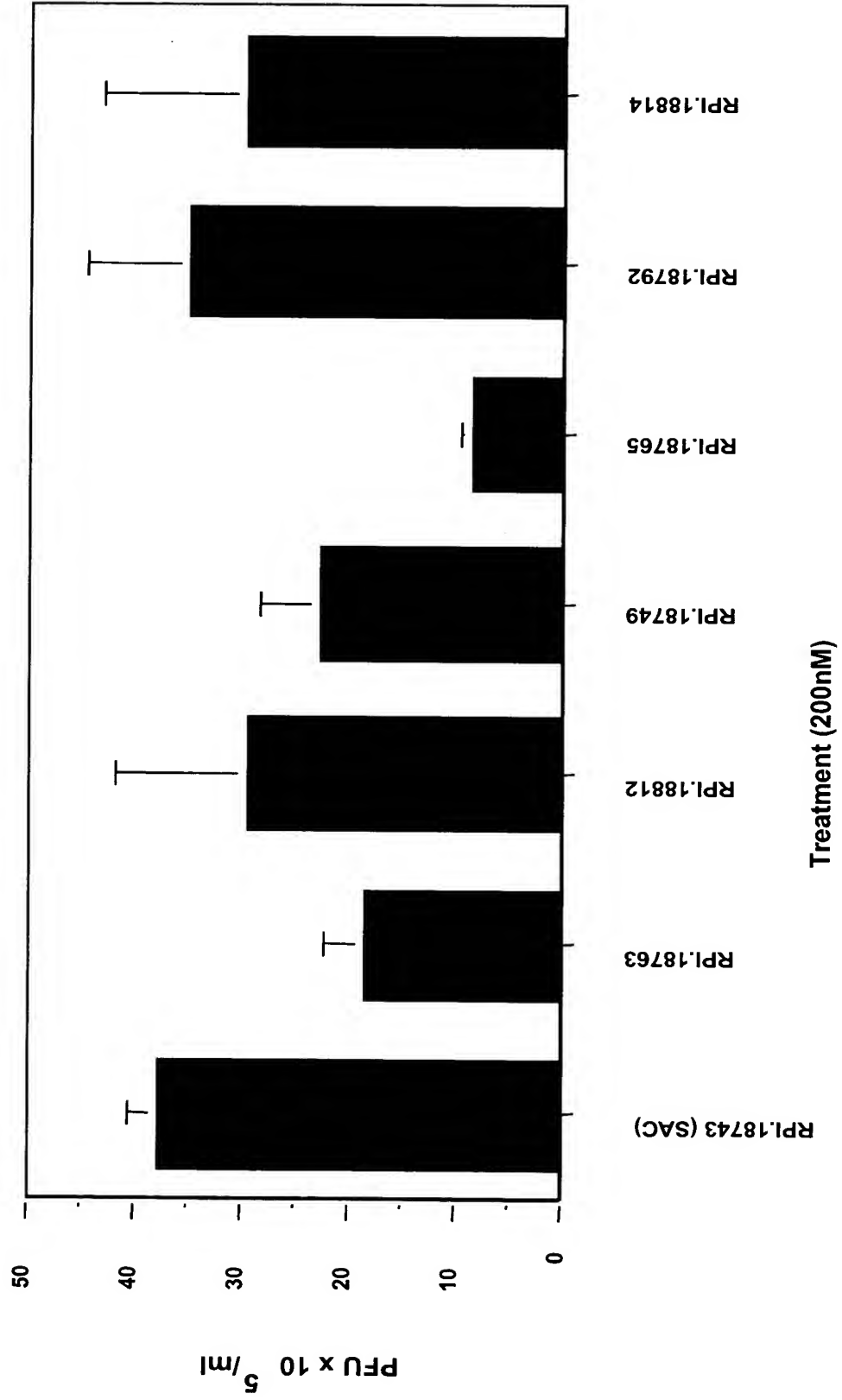


Figure 32: Enhanced antiviral effect of an anti-HCV enzymatic nucleic acid targeting site 195 used in combination with consensus interferon (CIFN)



**Figure 33: Inhibition of HCV-PV Replication
by Zinzyme Treatment**



**Figure 34: Inhibition of HCV-Poliovirus Replication by
Antisense**

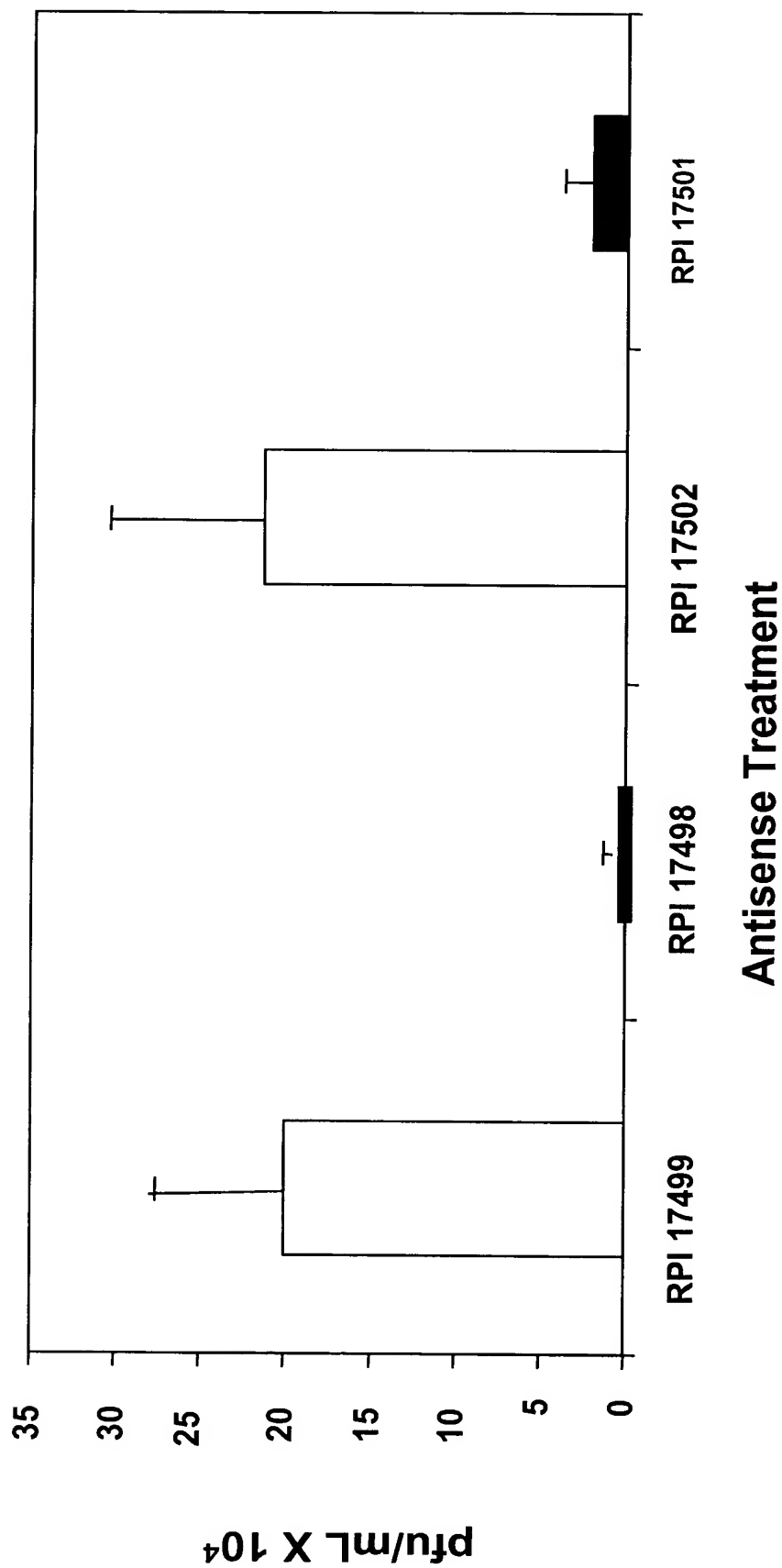
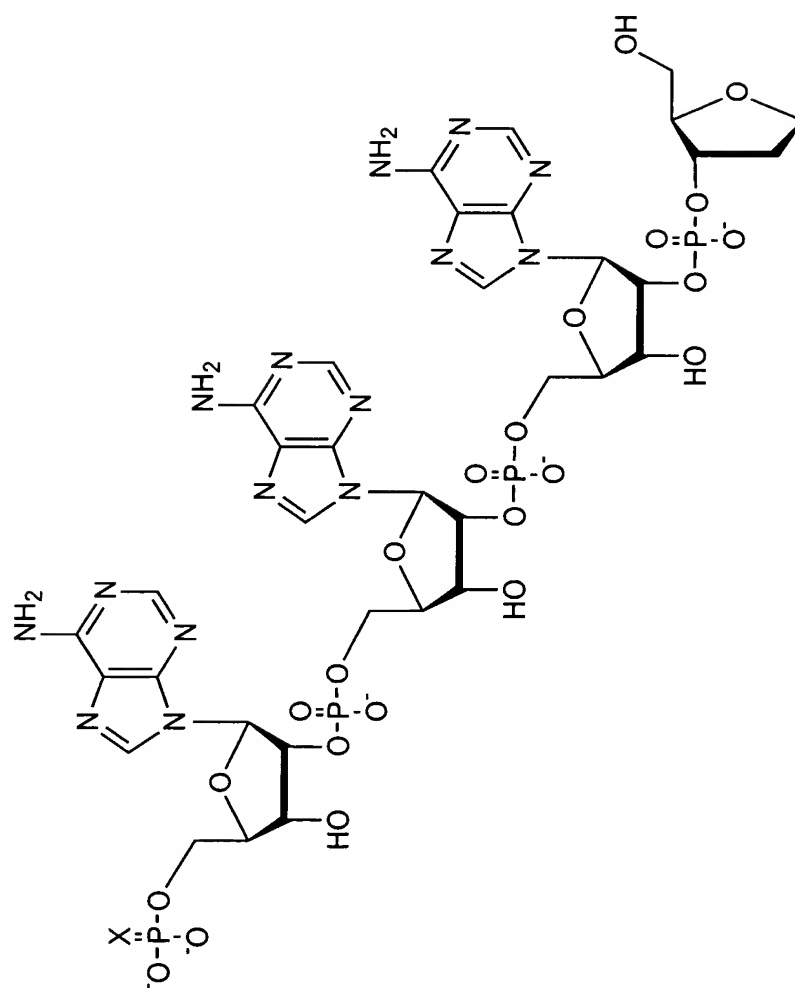


Figure 35: Modified 2-5A Compound



I: X = O
 II: X = S

Figure 36A: Ribozyme activity and enhanced antiviral effect

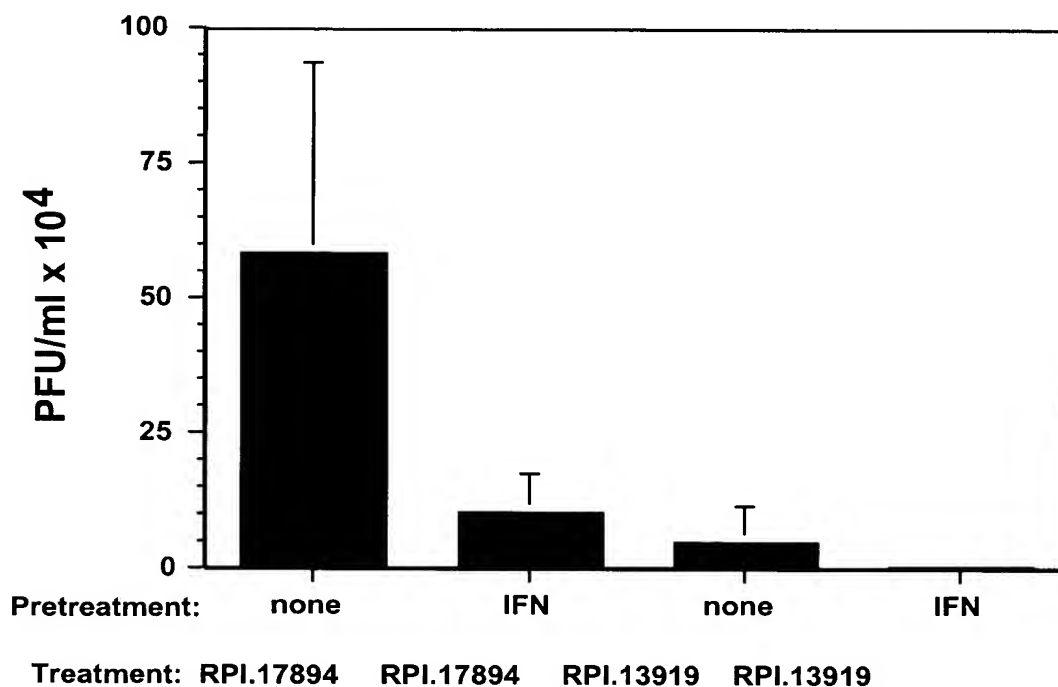


Figure 36B: Ribozyme activity and enhanced antiviral effect

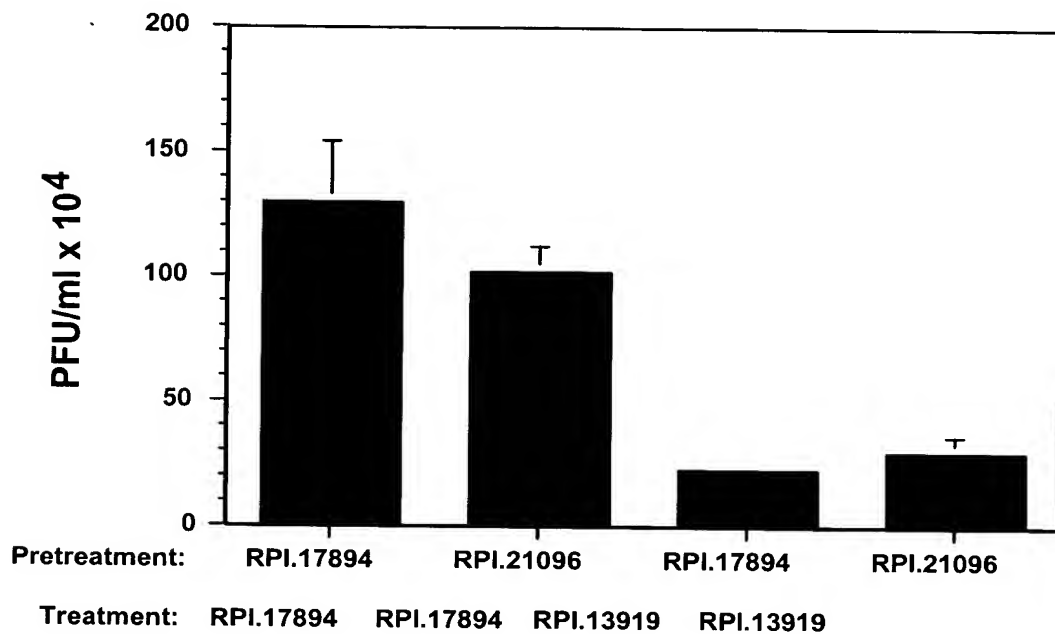


Figure 37: Inhibition of viral replication with anti-HCV ribozyme or 2-5A treatment

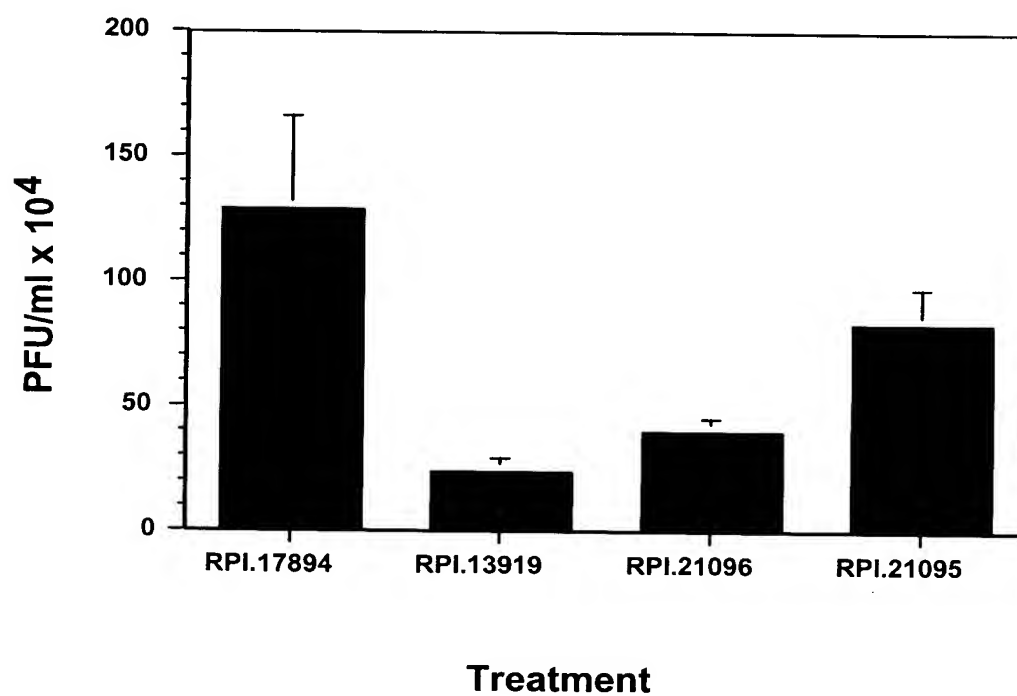


Figure 38: Anti-HCV ribozyme in combination with 2-5A treatment

